City of Hudson
Comprehensive Plan Update 2009

CONTENTS

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Welcome to Hudson
BRIDGING HISTORY & PROGRESS
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Gateway to Wisconsin

COMMUNITY CONTEXT

Introduction

A review and analysis of selected demographic and economic characteristics helps identify the factors that influence growth and development. These characteristics can also help determine the direction of future change and the development activities that can consequently occur.

This background information includes demographic trends, age distribution, education levels, income levels and employment characteristics that exist in the City of Hudson.

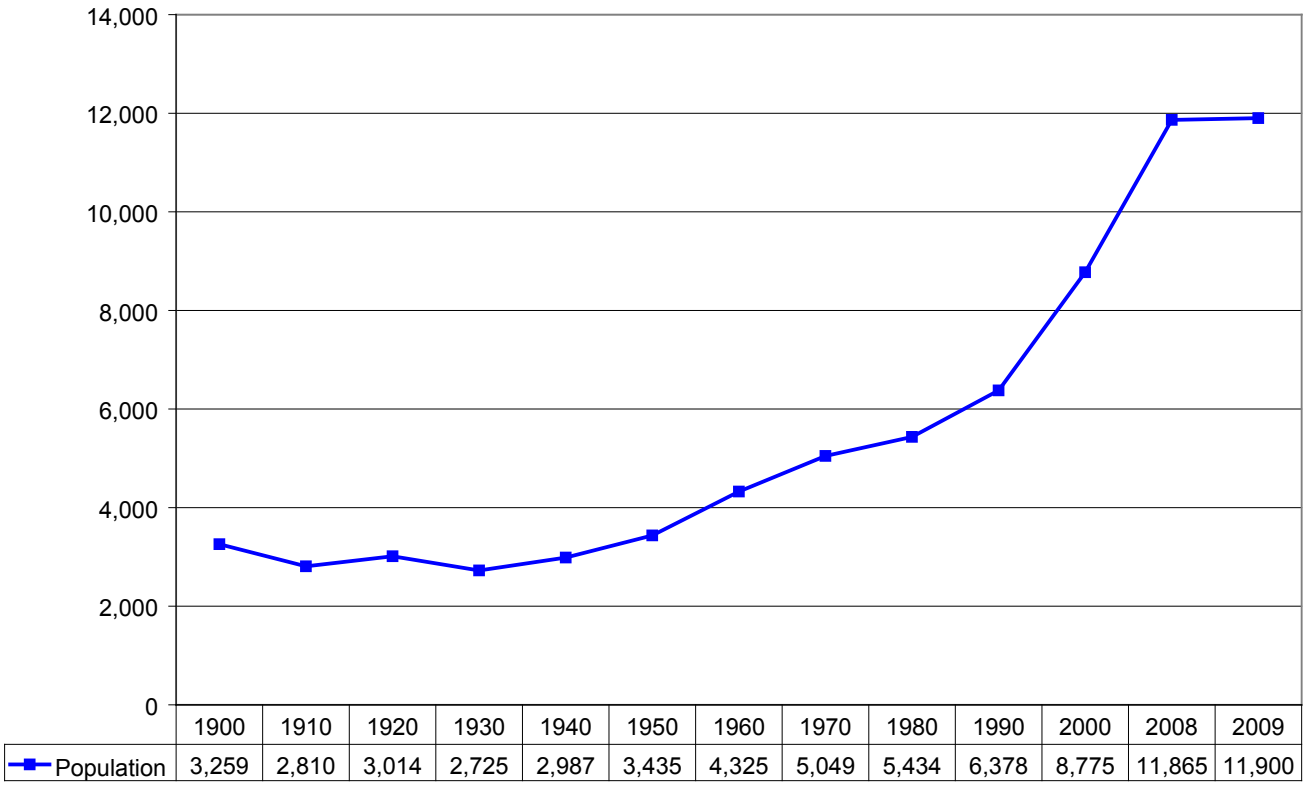
Hudson has experienced exponential growth in the past decades (Table 1-1 and Figure 1-1). As of the 2000 Census, there was 8,775 people residing in the City. Hudson has experienced considerable growth in recent years because of its proximity to the Twin Cities. Its 2009 estimated population is 11,865.

Table 1-1: Historic Population & Percent Change from Previous Period, 1900-2008

1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2008*	2009*
3,259	2,810	3,014	2,725	2,987	3,435	4,325	5,049	5,434	6,378	8,775	11,865	11,900
(--)	-13.7%	7.3%	-9.6%	9.6%	15.0%	25.9%	16.7%	7.6%	17.4%	38.0%	35.2%	35.6%

Sources: U.S. Census Bureau; *WiDOA estimate.

Figure 1-1 Historic Population Change



Population

Table 1-2 and Figure 1-2 show a comparison of population growth between the City of Hudson, the surrounding towns, and St. Croix County.

Between 1950 and 1980, Hudson had a slower rate of growth compared with other nearby communities, with the slowest rate of growth between 1970 and 1980. However, after 1990, Hudson was one of the fastest growing communities in the surrounding area with a 35.2 percent growth between 2000 and 2008.

Figure 1-2 Comparative Population Change (Percent)

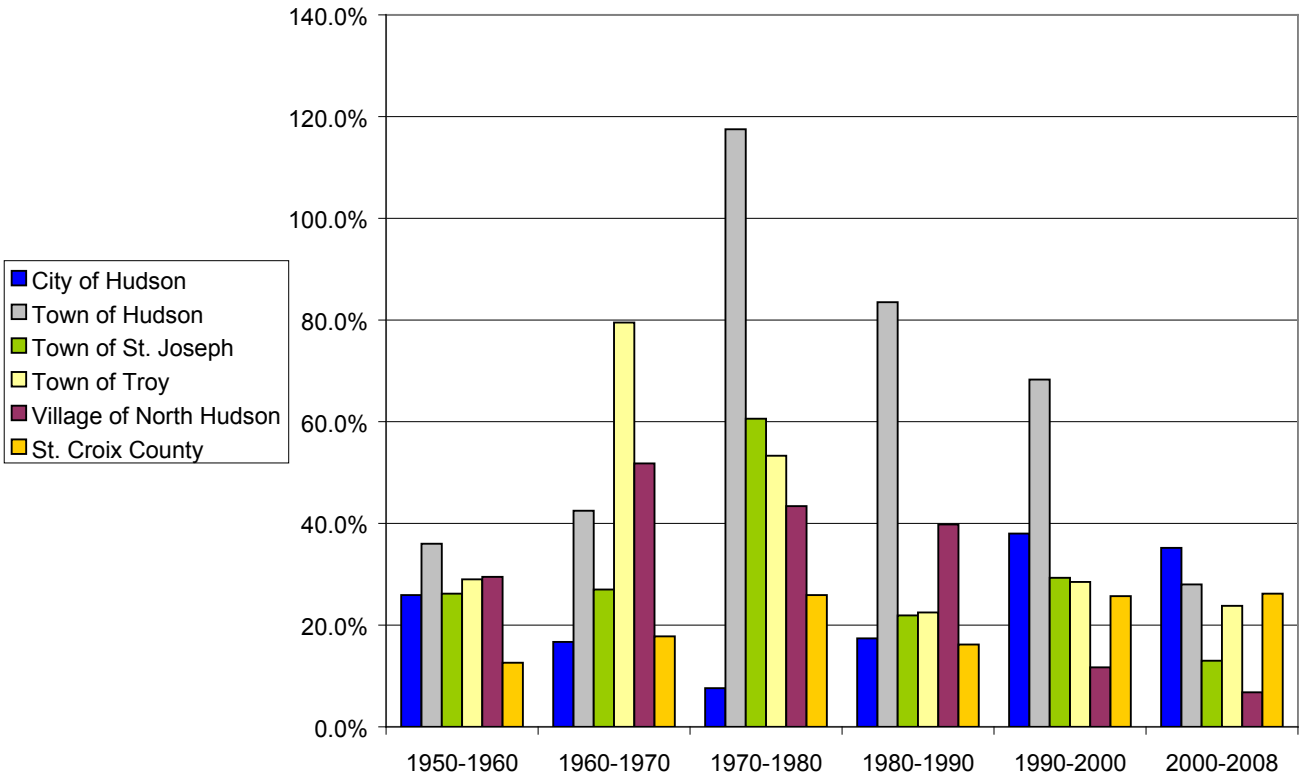


Table 1-2: Comparative Population Change, 1960-2000 (St. Croix County by Minor Civil Division)

MUNICIPALITY	1960	1970	1980	1990	2000	Percent Change:			
						1960-1970	1970-1980	1980-1990	1990-2000
City of Hudson	4,325	5,049	5,434	6,378	8,775	16.7%	7.6%	17.4%	38.0%
Town of Hudson	649	925	2,012	3,692	6,213	42.5%	117.5%	83.5%	68.3%
Town of St. Joseph	1,068	1,357	2,180	2,657	3,436	27.0%	60.6%	21.9%	29.3%
Town of Troy	845	1,517	2,326	2,850	3,661	79.5%	53.3%	22.5%	28.5%
Village of North Hudson	1,019	1,547	2,218	3,101	3,463	51.8%	43.4%	39.8%	11.7%
St. Croix County	29,164	34,354	43,262	50,251	63,155	17.8%	25.9%	16.2%	25.7%

Components of the Population

There are many components of the population that provides insight into the characteristics of the community. One component is the level of natural increase and net migration. Experiencing a larger number of births than deaths or more people moving into Hudson than people moving out are two ways a community's population can increase. Table 1-3 shows the components of Hudson's current and projected population from 2005 through 2030. Natural increase for St. Croix County is expected to remain stable until 2030 and will not have a dramatic effect on the future growth. However, net migration is expected to decrease over the next 20 years and will impact the population growth for St. Croix County. Net migration is expected to decrease from 5,985 between 2005 and 2010 to 2,702 between 2025 and 2030.

Age and sex distribution can give us insights into the implications of a changing population. Table 1-4 shows the current and

Table 1-3: Components of Population Change for St. Croix County, 2000-2030*

Component	2005-2010	2010-2015	2015-2020	2020-2025	2025-2030
County Births	5,004	2,674	6,218	6,525	6,654
County Deaths	2,587	2,887	3,229	3,652	4,136
Natural Increase	2,417	2,787	2,989	2,873	2,518
County Net Migration	5,985	4,401	4,246	2,731	2,702
County Total Change	8,402	9,188	7,235	5,604	5,220

Source: Demographic Services Center, WiDOA; *Estimates for 2005-2030

projected age and gender characteristics for Hudson between 1990 and 2010. An aging population is a nationwide trend as the baby boomer generation is approaching retirement age. Hudson has seen an increase in population within the older age brackets between 1990 and 2000.

Table 1-4: Population by Age and Gender, 1990-2010*

1990	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+	Total	Male	%	Female	%
City of Hudson	537	515	428	350	460	1,266	1,090	536	274	192	330	286	114	6,378	3,082	48.3	3,296	51.7
St. Croix County	4,140	4,490	4,196	3,526	3,051	8,907	8,231	5,097	1,869	1,644	2,621	1,717	762	50,251	25,075	49.8	25,176	50.2
2000	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+	Total	Male	%	Female	%
City of Hudson	539	676	597	411	668	1,575	1,422	1,070	334	244	446	348	178	8,508*	4,022	47.3	4,486	52.7
St. Croix County	4,423	4,921	5,124	4,741	3,568	8,844	11,505	8,918	2,889	2,001	3,172	2,072	977	63,155	31,608	50	31,547	50
2010**	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+	Total	Male	%	Female	%
City of Hudson	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,097	N/A	N/A	N/A	N/A
St. Croix County	5,349	6,127	5,722	5,539	4,974	11,669	11,479	12,694	4,930	3,936	4,577	2,560	1,223	80,779	40,578	50.2	40,201	49.8

Sources: U.S. Census and WiDOA; *WiDOA estimates

Table 1-5 shows population by race for Hudson from 1980 to 2000, including a breakdown of the City's population that claims Hispanic origin. Hudson contained a high proportion of individuals who identified themselves as Caucasian. However, comparing the change in demographics between 1980 and 2000, Hudson has become more racially and ethnically diverse. There has been an increase in individuals who identified themselves as African American, American Indian, Asian, Other, or Hispanic in 2000.

Table 1-5: Population by Race including Hispanic Origin, 1980, 1990 and 2000

	1980	1990	2000
Caucasian	5,385	6,333	8,588
African American	1	3	19
American Indian	24	14	23
Asian/Pacific Islander	4	28	40
Other	20	0	105
Hispanic Origin	14	13	112

Source: U.S. Census Bureau

Education

Table 1-6 shows the education levels of residents over 25 in Hudson compared with the state and nation in 2000. Hudson had a very strong level of educational attainment in both primary and higher education with higher percentages than the state and nation. An overwhelmingly high percentage of residents (95.2 percent) are high school graduates or higher, while 37.7 percent of residents have a bachelor's degree or higher.

Table 1-6: Educational Attainment Levels for Individuals 25 Year and Over

Education Level	Hudson	Wisconsin	U.S.
High School Graduate or Higher	95.2%	85%	80.4%
Bachelor's Degree or Higher	37.7%	22.4%	24.4%

Sources: U.S. Census Bureau and Demographic Services Center

Employment

The current growth of the area's economy is a major contributor to the employment opportunities available to residents of Hudson. The principal economic factors that influence an individual's quality of life and provide a choice of residential options are employment opportunities and income. A comparison of labor

force and employment statistics between 1980 and 2000 provides some insight into the economic well-being of the residents.

As indicated by the data presented in Table 1-7, the current economic downturn has resulted in a drastic increase in unemployment rates within the last two years. Between 2007 and 2009, the unemployment rate in St. Croix County increased from 5 percent to 7.5 percent. However, when compared to the state and national rates, St. Croix County's unemployment rate is slightly lower with 7.5 percent compared to Wisconsin with 8.4 percent and the nation at 9.6 percent. St. Croix County's unemployment rate has historically been lower than the state and nation. Figure 1-3 shows the unemployment rates from 1990 to 2009 for St. Croix County, Wisconsin, and the nation.

Table 1-7: Unemployment Rates		
	2007	2009
St. Croix County	5.0%	7.5%
Wisconsin	4.9%	8.4%
US	4.6%	9.6%

Source: Demographic Services Center, WiDOA

The Census Bureau collects place of residence employment data. This means that the data can indicate what occupations or industries the residents of Hudson work in, but not where they work. Table 1-8 presents a comparison of the occupation of Hudson residents between 1980 and 2000.

Figure 1-3 Unemployment Rates 1990-2009

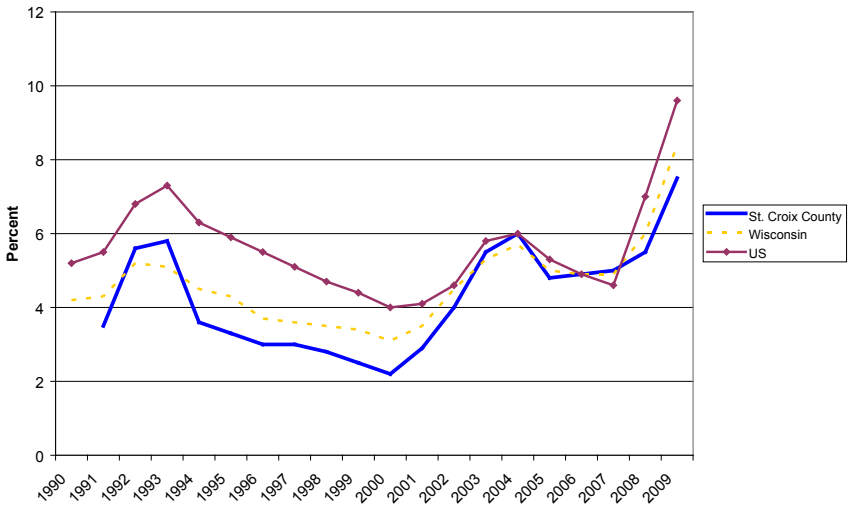


Table 1-8: Employment By Occupation of Resident Workers Age 16 and Up for the City of Hudson, 1980, 1990 and 2000				
	1980	1990	2000	
Executives, Administrators & Managers	311	493	Management, Professional & Related Occupations	1,953
Professional Specialty Occupations	330	471		
Technicians & Related Occupations	116	113	Service Occupations	624
Protective Services	38	57		
Private Household Services	13	5		
Other Service Occupations	290	375		
Sales Occupations	205	548	Sales & Office Occupations	1,254
Administrative Support Clerical	485	644		
Farming, Forestry & Fishing	7	11		N/A
Operatives, Assemblers & Inspectors	296	195	Construction, Extraction & Maintenance Occupations	333
Precision Production, Crafts & Repairs	287	278	Production, Transportation, & Material Moving Occupations	536
Transportation & Material Movers	101	86		
Handlers, Equipment Cleaners/ Helpers/Labor	116	128		

Sources: U.S. Census Bureau and Demographic Services Center, WiDOA; Occupation classifications combined for 2000 Census

Table 1-9 shows what industries or businesses Hudson residents were employed in as opposed to the occupations depicted in Table 1-8. In 2000, the largest industry for employment of Hudson residents was manufacturing with 17.7 percent followed by educational, health and social services (16.7 percent). There has not been a dramatic shift in employment between 1990 and 2000. The most significant shift was within the top two industries with manufacturing and educational, health and social services decreasing by 5 percent within a decade.

Table 1-9: Employment of Workers Age 16 and Up by Industry for the City of Hudson, 1990 and 2000				
	1990		2000	
	Number	Percent	Number	Percent
Agriculture, Forestry, Fishing & Hunting, & Mining	29	0.8%	26	0.6%
Construction	150	4.5%	250	5.3%
Manufacturing	774	23.0%	831	17.7%
Wholesale Trade	153	4.5%	158	3.4%
Retail Trade	444	13.2%	535	11.4%
Transportation and Warehousing, & Utilities	257	7.6%	338	7.2%
Information	N/A		133	2.8%
Finance, Insurance, Real Estate, & Rental & Leasing	303	9.0%	466	9.9%
Professional, Scientific, Management, Administrative, & Waste Management Services	N/A		417	8.9%
Educational, Health, & Social Services	746	22.1%	787	16.7%
Arts, Entertainment, Recreation, Accommodation & Food Services	215	6.4%	374	8.0%
Other Services (except Public Administration)	161	4.8%	156	3.3%
Public Administration	139	4.1%	229	4.9%
TOTAL	3,371		4,700	

Sources: U.S. Census Bureau and Demographic Services Center, WiDOA

Although the Census Bureau limits employment information to place of residence, they do provide information that can indicate where Hudson residents work. Table 1-10 shows how long it took Hudson residents to get to work from 1980 to 2000. From 1980 to 1990, the number of residents who commuted less than 45 minutes increased from 2,402 to 2,942 (22.5 percent increase), while from 1990 to 2000 the number of residents commuting less than 45 minutes rose from 2,942 to 3,905 (32.7 percent increase). More striking is the increase in residents commuting more than 45 minutes to their place of employment: from 88 in 1980, to 209 in 1990 (an increase of 137 percent), to 826 in 2000 (an increase of 295 percent).

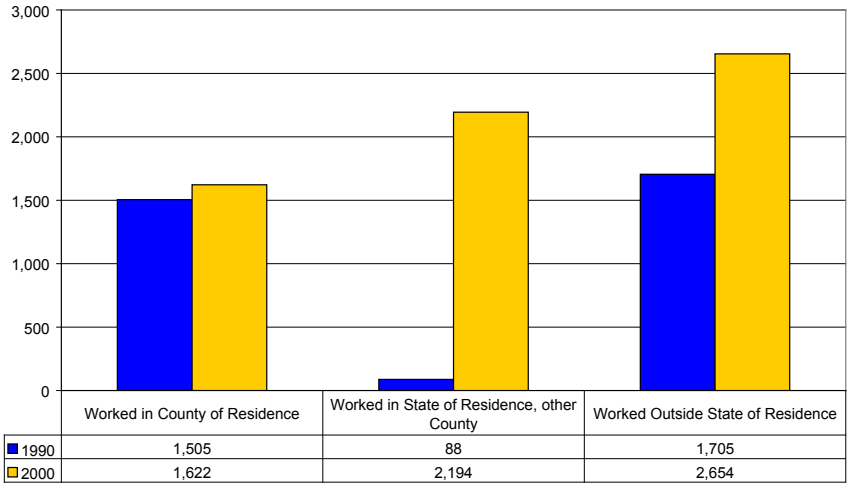
Table 1-10: Travel Time to Work for City of Hudson Resident Workers Age 16 and Up, 1980, 1990 and 2000

1980			1990	2000
Under 10 Minutes	920	Less than 30 Minutes	2,206	2,933
10 to 19 Minutes	624	30 to 44 Minutes	736	972
20 to 44 Minutes	858	45 to 59 Minutes	175	558
45 or more Minutes	88	60 or more Minutes	34	268

Source: Demographic Services Center, WiDOA

The Census information that reveals actual commuting patterns is called Place of Residence/Place of Work, shown in Figure 1-4. The contrast between the 1990 and 2000 data clearly shows an increase in residents finding employment outside of St. Croix County and the State of Wisconsin; residents in the latter group most likely are working within the State of Minnesota.

Figure 1-4 Place of Work for City of Hudson Resident Workers Age 16 and Over



Income

The combined effect of advanced education, increased employment opportunities, and evidence of well-paying occupations is also reflected in the earning capability and increasing incomes of City residents. Table 1-11 shows household income distribution for the City of Hudson with comparisons to St. Croix County. Household income is the sum of money income received in the calendar year before the Decennial Census is collected by all household members 15 years old and over, including household members not related to the householder, people living alone, and other non-family household members. Included in the total are amounts reported separately for wage or salary income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income.

Table 1-11: Household Income Comparison, 1989 (1990) and 1999 (2000)

	1989		1999	
	St. Croix Cnty.	City of Hudson	St. Croix Cnty.	City of Hudson
Less than $10,000	1,652	255	940	118
$10,000 - $14,999	1,121	120	971	164
$15,000 - $19,999	1,326	163	957	167
$20,000 - $24,999	1,326	142	1,069	169
$25,000 - $29,999	1,370	169	1,147	236
$30,000 - $34,999	1,481	240	1,066	121
$35,000 - $39,999	1,400	231	1,324	244
$40,000 - $44,999	1,272	185	1,496	272
$45,000 - $49,999	1,097	154	1,305	215
$50,000 - $59,999	2,004	288	2,581	454
$60,000 - $74,999	1,786	250	3,229	346
$75,000 - $99,999	1,072	154	3,827	459
$100,000 - $124,999	382	54	1,789	238
$125,000 - 149,999	174	57	795	188
$150,000 or more	160	21	932	174

Source: U.S. Census Bureau and Demographic Services Center, WiDOA

Table 1-12: Median Household and Per Capita Income Comparisons, 1989 and 1999

	Median Income (Household)		Per Capita Income	
	St. Croix Cnty.	City of Hudson	St. Croix Cnty.	City of Hudson
1989 (1990)	$36,716	$38,037	$14,912	$17,094
1999 (2000)	$54,930	$50,991	$23,937	$26,921
2003	N/A	N/A	$31,091	N/A
2004	N/A	N/A	$32,760	N/A
2005	N/A	N/A	$32,947	N/A

Source: Demographic Services Center, WiDOA

Table 1-12 shows the changes in income of Hudson and St. Croix County residents between 1990 and 2000. This table presents two different measures of income: median household income and per capita income. The median is the mathematically derived middle value with 50 percent above and 50 percent below that number. Per capita income is the average income computed for every man, woman, and child in a geographic area received in the calendar year before the Decennial Census. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area. It must be noted that income information is not collected for people under 15 years old although those people are included in the denominator of per capita income.

Another indicator regarding income is the poverty level. Changes in poverty levels can indicate whether economic conditions are improving for residents. As seen in Table 1-13, between 1990 and 2000, there was a decrease in poverty levels in St. Croix County and Hudson as a whole. However, within the different categories, there has been a staggering increase in the number of female-lead households with children under the age of 18. Hudson saw a two-fold increase, while the increase in St. Croix County was almost six-fold.

Table 1-13:1989 Poverty Levels (Percent)					
	All Ages	Related Children Under 18	Age 65 and Over	Percent of Families	Female Householder, No Husband, with Related Children Under 18
St. Croix County	6.4%	7.6%	10.6%	4.7%	1.8%
Hudson	6.4%	9.2%	16.4%	4.0%	3.1%
1999 (Poverty Levels (Percent)					
	All Ages	Related Children Under 18	Age 65 and Over	Percent of Families	Female Householder, No Husband, with Related Children Under 18
St. Croix County	4.0%	3.9%	7.2%	2.4%	12.5%
Hudson	3.5%	4.0%	3.5%	1.7%	6.0%

Population Forecast

Population projections or forecasts have long been used in planning to assess development prospects created by population growth. Small area population forecasts can be used to evaluate potential residential development and economic condition, and the level of demand for public services. Businesses, schools and government frequently use these forecasts to determine the future needs or design of public facilities.

Population projections are based on historical trends of population growth that are extended into the future. They are based on the assumption that the historical trends, and the factors behind them, will continue to some point in time. It is certain that not all of those factors will have the same influence on population change throughout the entire forecast period. It is also true that the closer the projection year is to the base year, the more likely the population for that projection will be close to the true population. Hence, the margin of error in population forecasts increases the farther out in time they are from the present.

The population forecasts for the City of Hudson and St. Croix County were developed by the Wisconsin Department of Administration, Demographic Services Center. The population projections were derived from the 1980, 1990 and 2000 Census population and Demographic Services' January 1, 2002 population estimate. The methodology used produces a trend line that emphasizes change that is more recent over more remote trends.

Table 1-14 shows a likely 35.4 percent increase in population for the City of Hudson between 2008 and 2025. St. Croix County shows a similar possible increase of 33 percent between 2008 and 2030.

Table 1-14: Final Population Projections for St. Croix County and the City of Hudson, 2000 - 2030

	2000	2008*	2010*	2015*	2020*	2025*	2030*
Hudson (City)	8,775	11,865	12,097	13,507	14,921	16,060	N/A
St. Croix County	63,155	79,702	80,779	87,967	95,202	100,806	106,026

Source: Demographic Services Center, WiDOA; *Estimates

Household Forecast

Household forecast is used to help develop housing and land use forecasts. The household forecast provides what household size is likely to be.

The household size projection predicts that the number of households in St. Croix County will increase, but the number of persons in the household will decrease. This can be contributed to an expected increase of more people living alone, which is primarily a result of aging households.

Table 1-15: Final Household Projections for St. Croix County, 2000 - 2030							
	2000	2005	2010*	2015*	2020*	2025*	2030*
Household Population:	62,219	71,313	79,575	86,631	93,697	99,070	103,964
Persons per Household:	2.66	2.64	2.58	2.53	2.49	2.46	2.43

Sources: U.S. Census Bureau and Demographic Services Center, WiDOA; *Estimates

Table 1-16: Past and Projected Number of Households								
	1990	2000	2005	2010*	2015*	2020*	2025*	2030*
City of Hudson	2,483	3,687	4,436	5,226	5,951	6,687	7,273	N/A
St. Croix County	17,623	23,410	27,013	30,814	34,222	37,655	40,269	42,799

Sources: U.S. Census Bureau and Demographic Services Center, WiDOA; *Estimates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LAND USE

Introduction

This Chapter provides a summary of future land uses within Hudson. Located along the scenic St. Croix River, Hudson offers a mix of housing types, recreational activities and educational opportunities. This Chapter, along with the corresponding maps and land use policies was developed with an understanding of the City's past growth patterns and future expansion needs.

An important element of land use planning is that development forces, market conditions and political approaches change over time. Therefore, it is vital that this Plan be reviewed on an annual basis to ensure that policies, land use classifications, and mapping needs remain consistent with the overall goals and values of the City. The following graphics depict the planning process of the land use plan, how this plan was adopted as well as how to amend the Land Use Plan.

Key Reasons for Having a Plan

- Provides a road map for planning over the course of a twenty year period (although the plan should be reviewed on an annual basis).
- Provides a framework for development and redevelopment.
- Outlines issues related to each planning district in the City.

How the Plan was Adopted

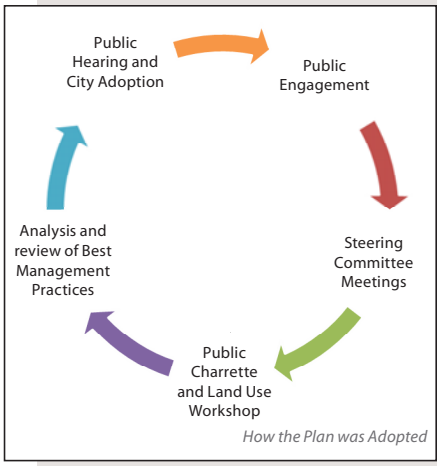
- Monthly committee meetings
- Public open house meetings
- Periodic updates to City boards
- Public hearing and formal adoption

How to Use this Plan

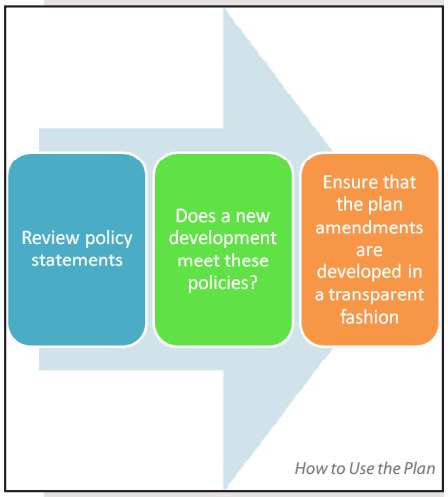
- All development and redevelopment within the City should be reviewed against the goals and policies of the comprehensive plan.
- City boards should review this document and the policies within at the beginning of each year to determine if an amendment is necessary.

How to Amend this Plan

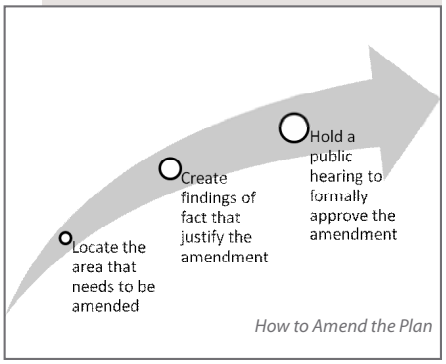
- Amending a section of the Comprehensive Plan is a normal process.
- Before any amendment is approved, adequate pubic review should take place.
- As a way to ensure that the process is transparent and participatory, invite the public to an informational meeting prior to the public hearing.



How the Plan was Adopted



How to Use the Plan



How to Amend the Plan

Land Use Classifications

The City of Hudson is made up of a variety of land uses. Since the last comprehensive plan was completed in 1993, there has been a significant change in land uses within the City. Table 2-1 illustrates the percentage of land uses from 1993 compared with 2009.

Table 2-1: Land Use Percentages		
	1993 Land Use Percentage	2009 Land Use Percentage
Single Family Residential	23.2%	25%
Multiple Family Residential	3.2%	9%
Commercial	11.0%	17%
Industrial	4.4%	10%
Public	na	5%
Institutional	6.7%	7%
Park	4.7%	6%
Conservancy	na	1%
Open/Farmland	28.5%	na
ROW or No Data	18.3%	20%

Over the past sixteen years, there has been a steady increase in residential development. New residential developments in the southwestern and northeastern portion of the City has created additional housing options.

Commercial and industrial uses have seen a slight increase; however, those averages are above those found within St. Croix County.

In the 16 year period, from 1993 to 2009, the city nearly doubled in the amount of land area within the corporate limits. One significant reason for the increased land area was due to the annexation of part of the Interstate 94 and State Trunk Highway 35 right-of-ways. Other land use categories that increased noticeably include the amount of residential, commercial and industrial land use categories due to the rapid growth experienced by the city in the late 1980s through 2007. New categories for public and institutional uses have been established for this comprehensive plan and are denoted in the land uses listed in Table 2.1. Generally most of the land from those two categories would have been

Projected Population and Household Size

The estimated population, provided by the Wisconsin Department of Administration, of the city of Hudson in 1993 was 6,743 and in 2009 – 11,900, a population increase of 5,157. Refer to Table 1-14, page 14. In 1993 the number of persons per acre was 2.93 and in 2009 the number of persons per acre was 2.86. The projected population increase from 2010 to 2025, based on Wisconsin Department of Administration estimates is 3,963 persons or an increase of 264 persons per year for that 15 year

period. It is estimated the number of persons per household, for St. Croix County, will range from 2.46 to 2.58 during that 15 year period. The city of Hudson may experience fewer persons per household due to a higher percentage of elderly persons living in the city of Hudson versus other areas of the county. So if a household of 2.46 persons is used the number of projected households would be 2,096. Based on an assumption of one dwelling unit per household approximately 2,096 dwelling units would be needed to address the projected population increase for the period of 2010 to 2025.

Residential Development

Based on the population projected for 2010 to 2025, a demand of 2,096 dwelling units or approximately 140 dwelling units per year are needed. In 2009 the number of projected dwelling units to be constructed in existing subdivisions is approximately 550. At 140 dwelling units per year, which is likely high until the economy and housing construction industry recovers, existing subdivisions within the city corporate limits would take about four years to build out. In addition to existing subdivisions 1,546 dwelling units in new developments would be needed to accommodate the projected population growth during the period of 2010 through 2025. The amount of land to accommodate the balance of projected households or dwelling units is dependent on future residential densities. A range of three (3) to eight (8) units per acre can be applied, based on prior development densities experienced within the city. Based on that range of densities the amount of land for residential development from 2010 to 2025 would be 193 acres (8 units per acre) to 515 acres (3 units per acre).

Octagon House
St. Croix Historical Society

Medium Density Residential

From the period of 2001 through 2008 the average number of dwelling units constructed in the city of Hudson was 195 units per year. Due to the downturn in the number of housing units being constructed after 2005 it is difficult to predict, if or when, the number of dwelling units to be constructed will return to levels experienced by the city from 2001 to 2005. During that eight year period (2001 – 2008), the lowest number of dwelling units constructed was experienced in 2008 with 50 units. In contrast the high number of dwelling units constructed was in 2004 with 359. Areas of residential development in the future will include the Carmichael Road corridor north of I-94 and an area along the CTH F corridor south of the River Crest Elementary School.

Commercial and Industrial

The amount of demand for commercial land is difficult to project, but looking at the period of 1993 to 2009 the amount of commercial property added per year to the city, on the average,

Downtown Commercial

General Commercial

Industrial

Park

was 28.5 acres. Of the 700 acres of commercial property that were identified in 2009, within the city of Hudson, approximately 250 acres are undeveloped or underdeveloped including the 140 acre site of the vacated St. Croix Meadows dog track. The city also has designated approximately 100 acres abutting the Carmichael Road corridor from I-94 to Vine Street for potential expansion of the commercial base.

Redevelopment of existing commercial properties in the downtown area and "the hill" commercial on the north and south sides of I-94 offer future commercial development opportunities and may slow the expansion of the corporate boundaries and extension of municipal sanitary sewer, storm sewer and water utilities.

There is approximately 65 acres of industrial land within the city of Hudson that is not developed, almost entirely in the St. Croix Business Park. The city has identified the Mimbach quarry, located west of the business park, as an area that may be potential industrial and recreation land in the future. Other possibilities to expand the base of industrial properties is the potential conversion of some of the undeveloped commercial properties to industrial, or to consider the commercial properties to be developed as a mixed-use commercial / industrial business park.

It is anticipated that the city of Hudson's existing corporate boundaries can accommodate development for a period of five to ten years, depending on the rate of development during that period and the type of developments that will be proposed. Development also may be proposed within that 5 to ten year period in areas adjacent to the city, but will be contingent upon annexation of land to the city and the availability of municipal services, particularly the provision of wastewater treatment plant capacity. Annexations should be considered on a case by case basis. Any area south of the city of Hudson, south of Tower Road in the town of Hudson, that may consider requesting annexation to the city of Hudson, will require an amendment to Hudson Area Sewer Study prior to the city being able to serve that area.

Parks and Recreation

The city of Hudson park board will review opportunities to expand the park system, however, the priority at this time is to invest in the continued improvement of existing city parks. The city will continue to collect impact fees from new construction to support the development of parks and investment in park improvements. One area that may be available for future park development in the future is the Mimbach quarry located south of Hanley Road. As the quarry is reclaimed this area will be reviewed for development, possibly in conjunction with industrial development.

Future Land Use and Planning District Maps

The future land use maps and planning district maps will be used to guide the city for future development within the city of Hudson and provide consistency for future use designations and the implementation of the city zoning ordinance and consideration of zoning map amendments. The designations made in the town of Hudson and town of Troy will be used for general guidance upon consideration of properties into the city upon consideration of annexation to the city of Hudson. Policies for the eight planning districts within the city of Hudson and the general "extraterritorial" areas in the towns of Hudson and Troy are presented later in this chapter.

Summary

Growth of municipalities is often referenced to increased population. In that context the city of Hudson and St. Croix County have experienced some of the highest percentages of population increase in the state of Wisconsin from 1990 to 2000 and 2000 to the present. However, due to the downturn in the economy and the resulting decrease in new home construction the population growth has slowed considerably in 2007 through 2008. It will be difficult to predict if there will be a return to the levels of new construction that the city of Hudson experienced from 2000 through 2008 or when. Thus, it is difficult to project a time line for growth of the city based levels of construction activity.

Development will generally continue in three (3) forms:

- New infill development of vacant properties within the city of Hudson where municipal services are available
- Redevelopment of existing parcels where older developments now exist
- New development in areas annexed to the city of Hudson

It is possible for the city to serve areas adjacent to the city of Hudson with the extension of municipal water and sanitary sewer trunk systems and the expansion of the wastewater treatment plant, if warranted. Each request for annexation should be reviewed in regard to the type of development, the availability of municipal services, impact of traffic and the overall economic impact on the city of Hudson.

The city of Hudson will continue to experience growth due to the city's proximity to the Twin Cities metropolitan area. The 2009 comprehensive plan will serve as a document to assist the city of Hudson Common Council, plan commission and other committees, boards and commissions in the consideration land

use decisions.

Future Land Use

To assist in making future land use decisions, the City has been separated into eight planning districts. Within each of these planning districts, a future land use map has been developed that illustrates the locations throughout the City where commercial, industrial, residential, mixed use and open/park space should be located.

Figure 2-1 illustrates the 2030 Master Plan. The land use allocations shown on the map are supported by land use projections linked to population projections and forecasts.

Within the context of a land use map there are land use classifications. These classifications outline the general purpose of the land use map. The City's zoning ordinance will provide, in specific detail, the parameters for which this type of classification can occur within the City. Below is an overview of each land use classification found within this plan.

Single and Two Family Residential

This classification provides for development of one to six dwelling units per acre. Such areas are largely comprised of single family detached dwellings.

Medium Density Residential

Dwelling types within this classification include single-family residential, duplexes, attached dwelling and multiple residential dwelling units. Medium density residential includes a density range of 6 dwelling units per acre to 16 dwelling units per acre.

High Density Residential

The density range within this land use classification is between 17 and 44 dwelling units per acre.

Recreational Commercial

This land use is intended to allow those uses that promote the development or redevelopment of indoor or outdoor recreational or cultural activities.

Neighborhood Commercial

The neighborhood commercial land use classification is intended to provide small scale commercial retail that is pedestrian and auto oriented. New or redevelopment uses within the neighborhood commercial land use district will be required to provide a comprehensive pedestrian-shed plan.

Downtown Commercial

The downtown commercial area includes a mix of office, retail, institutional and open space. Land development within the downtown commercial district must adhere to the policies found

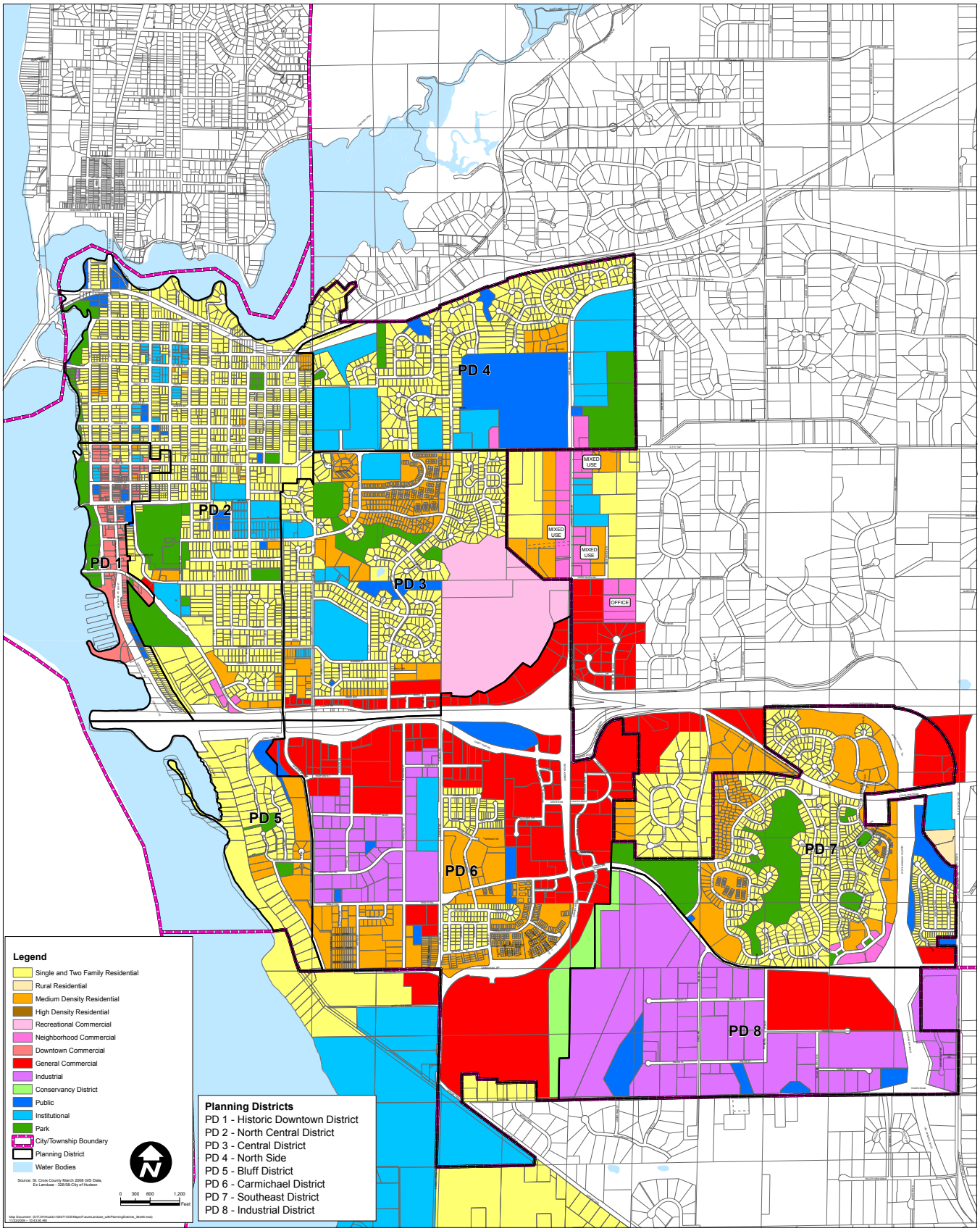


Figure 2-1: 2030 Master Plan

within the Downtown Visioning Guidelines for Policy and Design Quality.

General Commercial
This commercial area contains retail uses intended to serve the community and surrounding areas.

Industrial
This land use category emphasizes office, manufacturing, warehousing, processing and assembly of goods.

Conservancy District
The purpose of this district is to promote the long-term protection of natural areas within the City of Hudson.

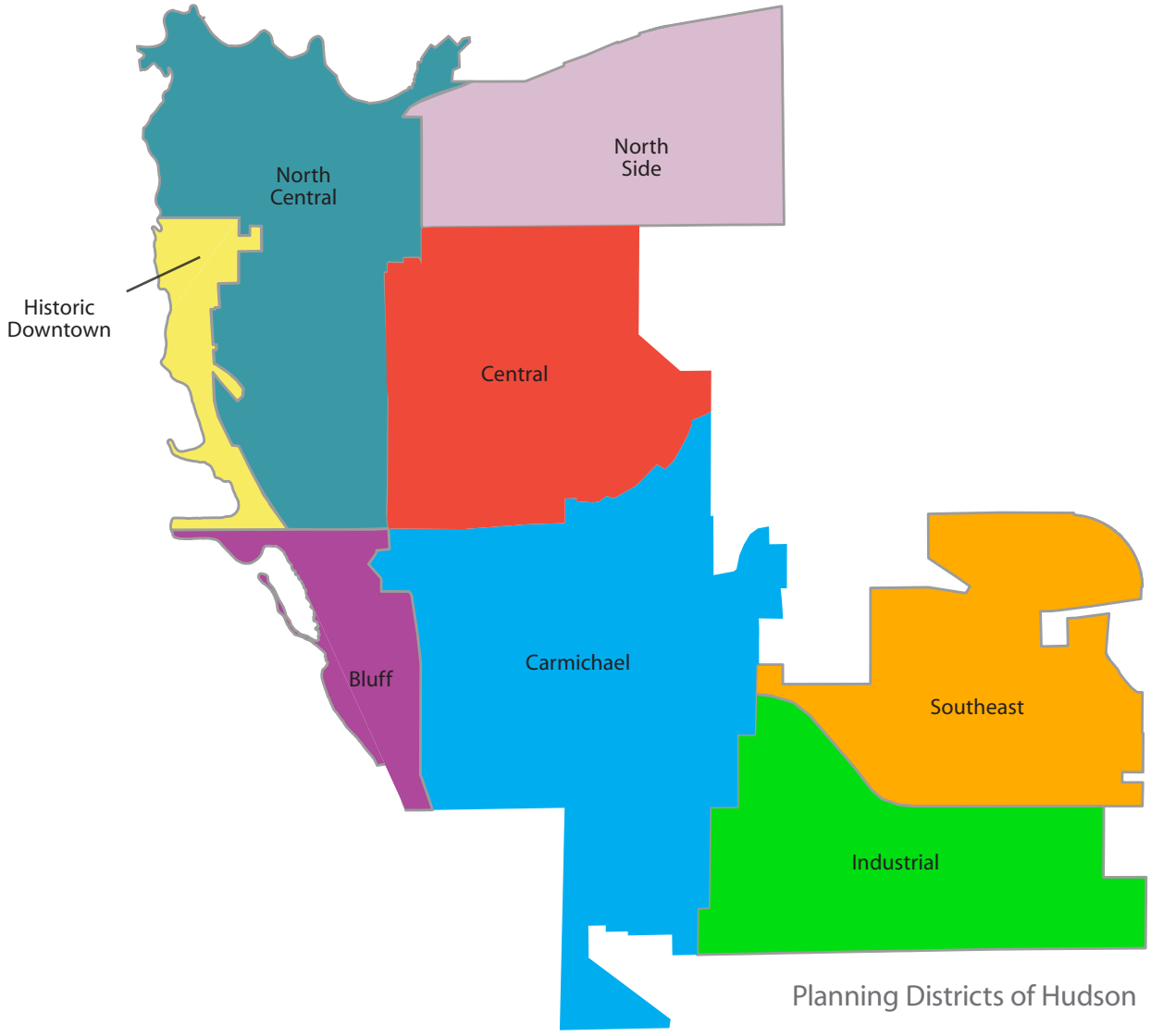
Park
This area includes park and recreational areas, natural corridors, drainage ways, and other open spaces.

Public
Public areas within Hudson include City Hall, police, fire, Public Works, public library, city-owned property, and the Park Department.

Institutional
Institutional areas within Hudson include most educational facilities, schools, cultural institutions, and religious institutions.

Planning Districts
To assist future land use decisions pertaining to both new development and redevelopment opportunities within the City of Hudson, the following planning districts have been delineated. The location of these districts has been determined based upon geographical location, the arrangement of similar land uses, and/or by physical barriers such as major streets, highways or water bodies. Within each planning district, there is a geographic introduction, percentage of land use outline, land use map and planning recommendations.

- Historic Downtown District
- North Central District
- Central District
- North Side District
- Bluff District
- Carmichael District
- Southeast District
- Industrial District



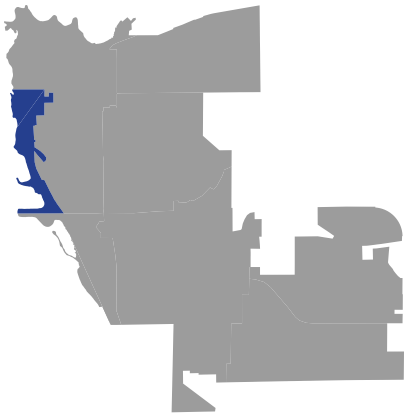
Planning Districts of Hudson

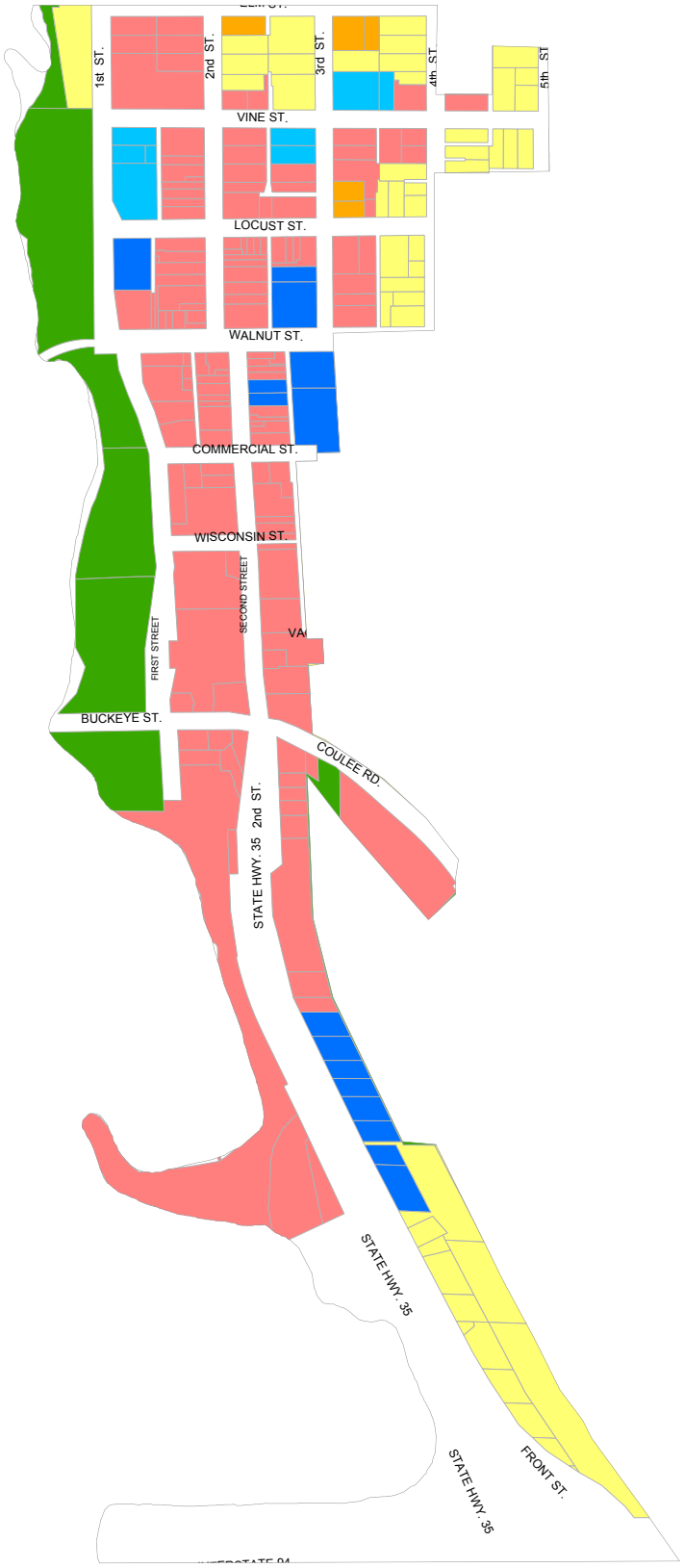
The historic landmark of the Casanova Liquors' cave is located in the North Central District.

Hudson Planning District 1
Historic Downtown District

The Historic Downtown District includes much of the historic downtown area of Hudson. The Historic Downtown District is bounded by I-94 to the south, the St. Croix River to the west, Elm Street to the north and most of 3rd Street to the east. Most of this district is guided for commercial uses. Currently, this area has a substantial amount of vacant commercial space (office and retail) available for use and/or redevelopment. The recommendations for the Historic Downtown District are found below:

- Incent and enable dramatic investment to create substantial initial tax increment financing. This is funding for added plan and design quality features, distributed parking garages, and other leverages.
- Enact an overlay district that employs mixed-use shared parking requirements, under the Urban Land Institutes (ULI's) 2005 Shared Parking Publication.
- Create incentives for public/private partnerships for parking.
- Provide a pool of parking spaces for the downtown properties/businesses that have limited land available for needed parking spaces.
- Provide incentives for the multiple-use application of buildings.
- Provide incentives to create and maintain private/public plazas, connections and spaces.
- Provide incentives to encourage property owners to work together.
- Seek additional funding sources for Downtown design enhancements and improvements.
- Preserve the historic architecture of buildings within this district by developing a historic overlay district.





Historic Downtown District

Land Use	Acreage Total
Single and Two Family Residential	14.48
Medium Density Residential	1.07
Downtown Commercial	38.11
Public	5.19
Institutional	2.42
Park	14.25
Total Acreage	126.11

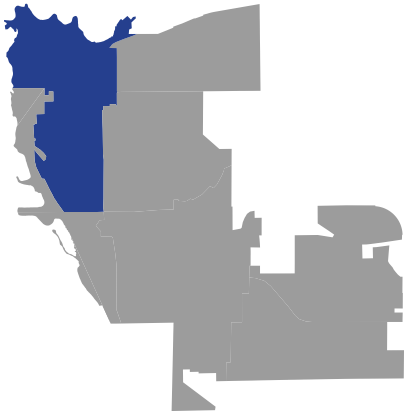
Birkmose Park provides magnificent views overlooking the St. Croix River Valley and river.

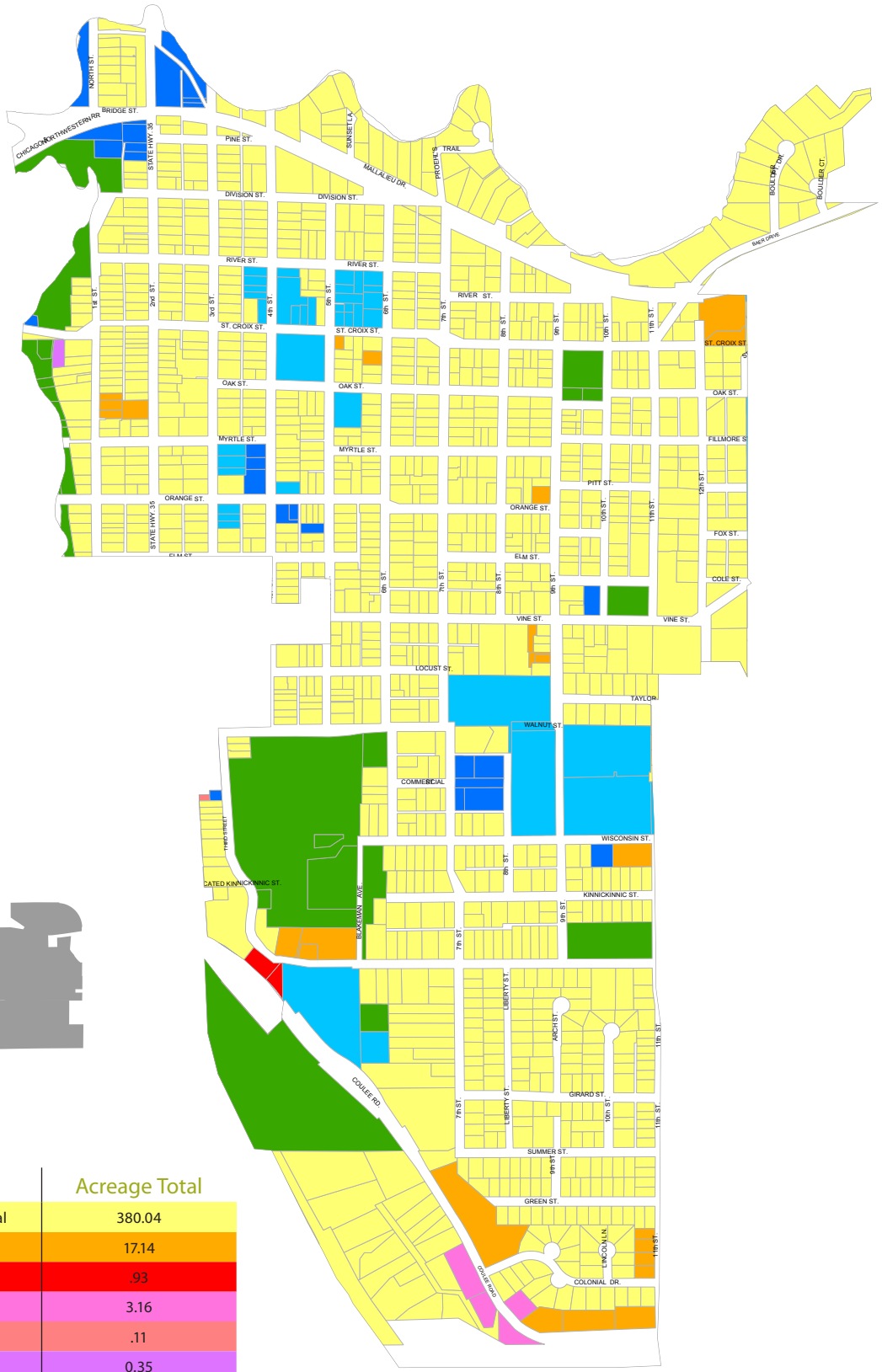
Hudson Planning District 2
North Central District

The North Central District encompasses the area surrounding the historic downtown and contains a traditional grid neighborhood pattern. The district is bounded by the North Hudson District to the north, by the Historic Downtown District and the St. Croix River to the west, by 11th and 13th Streets to the east, and I-94 to the south. The primary use is single-family residential of mature character and the area is guided for single-family residential in the future as well.

Policies

- Promote medium density (3 to 12 units per acre) residential land uses in areas abutting the Historic Downtown District.
- Develop architectural standards for future redevelopment.
- Promote private reinvestment and housing maintenance within the district through zoning flexibility.
- Consider mixed use zoning as a redevelopment option for homes within the district in transition areas.





North Central District

Land Use	Acreage Total
Single and Two Family Residential	380.04
Medium Density Residential	17.14
General Commercial	.93
Neighborhood Commercial	3.16
Downtown Commercial	.11
Industrial	0.35
Public	12.24
Institutional	40.73
Park	62.47
Total Acreage	703.79

The Hudson Golf Club comprises 23 percent of the Central District.

E.P. Rock Elementary School.

Hudson Planning District 3
Central District

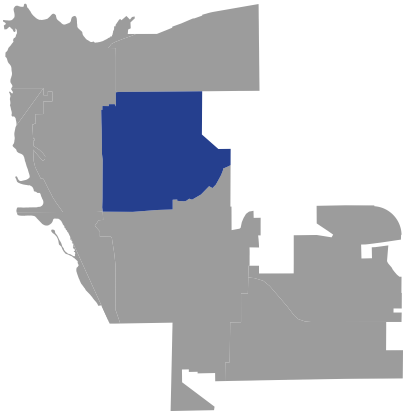
The Central District is centrally located in Hudson and contains mostly single-family homes in a suburban pattern. The district is bounded by Vine Street on the north, by the Town of Hudson and commercial uses on the east, by commercial uses on the south, and by 11th Street and single-family residential uses on the west. The primary use in this area is single-family residential and is guided for areas of single-family residential, as well as areas of recreational and highway commercial uses in the future.

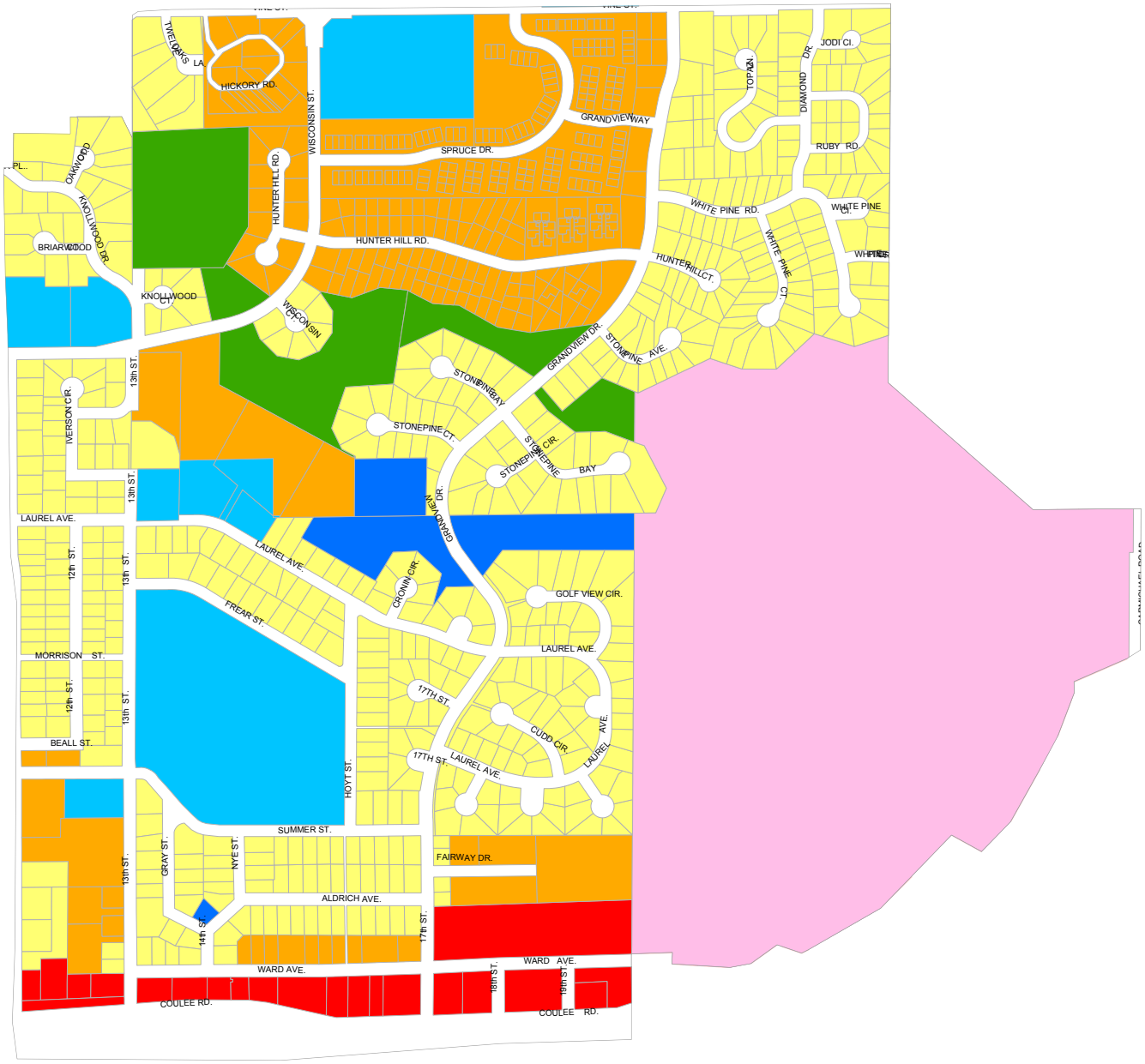
Policies

- Provide safe trail connections to the Carmichael District, as well as the school within the district.
- Examine redevelopment to higher residential densities south of Ward Avenue.
- Promote private reinvestment and housing maintenance within the district through zoning flexibility, housing rehabilitation incentives and code enforcement.
- Require new commercial establishments to utilize frontage and back roads and meet access spacing guidelines.
- Promote the redevelopment of a neighborhood commercial corridor north of I-94. Develop standards that allow for the redevelopment of neighborhood scale, walkable shops that tie into the Central Planning District.

Central District

Land Use	Acreage Total
Single and Two Family Residential	169.86
Medium Density Residential	85.58
Recreational Commercial	139.75
General Commercial	18.97
Industrial	1.42
Public	11.35
Institutional	45.83
Park	26.19
Total Acreage	592.91





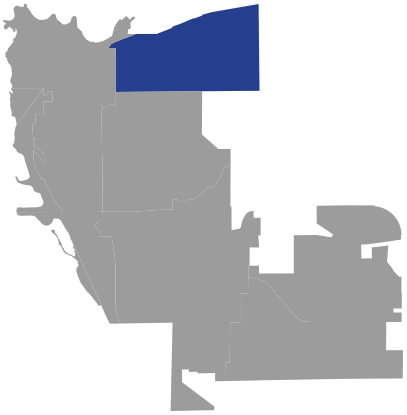
Institutional uses such as Hudson High School are located within the North Side District.

Hudson Planning District 4
North Side District

The North Side District is located in the northeastern area of Hudson and features primarily single-family residential uses in a suburban pattern. The district is bounded by North Hudson to the north, by the Town of Hudson to the east, by Vine Street and the Town of Hudson to the south, and by 13th Street to the west. The primary use in this district is single-family residential and is guided for single-family uses.

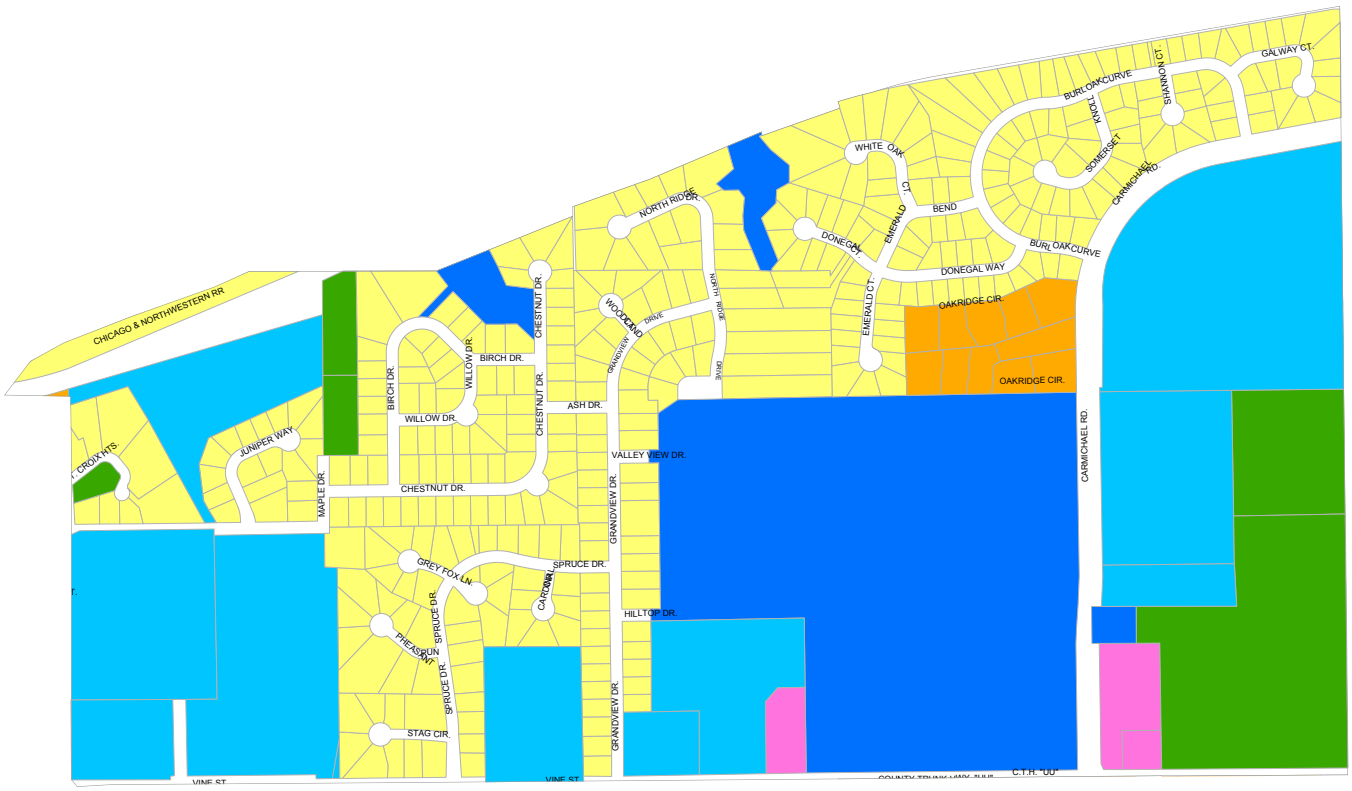
Policies

- Promote the preservation of low density residential development (3 units per acre).
- New development should incorporate sidewalks and bike lanes for easier access to the school.
- Cul-de-sacs will be discouraged unless higher design standards are incorporated into the overall neighborhood design. These include trails, pocket parks or passive park areas.
- Develop a street network that can support future annexation and residential development from the east.
- Commercial development and redevelopment should incorporate design standards that contain runoff on-site and incorporate stormwater treatment trains or rain gardens to the extent possible.



North Side District

Land Use	Acreage Total
Single and Two Family Residential	158.58
Medium Density Residential	10.27
Neighborhood Commercial	6.66
Public	88.46
Institutional	119.79
Park	38.13
Total Acreage	479.63



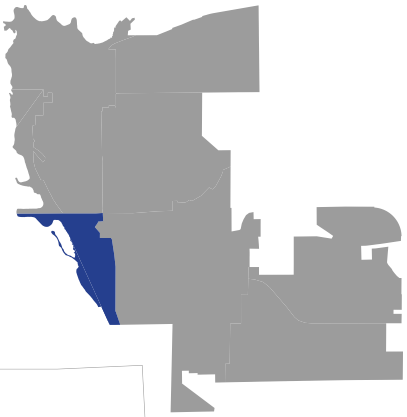
Looking along Crestview Drive.

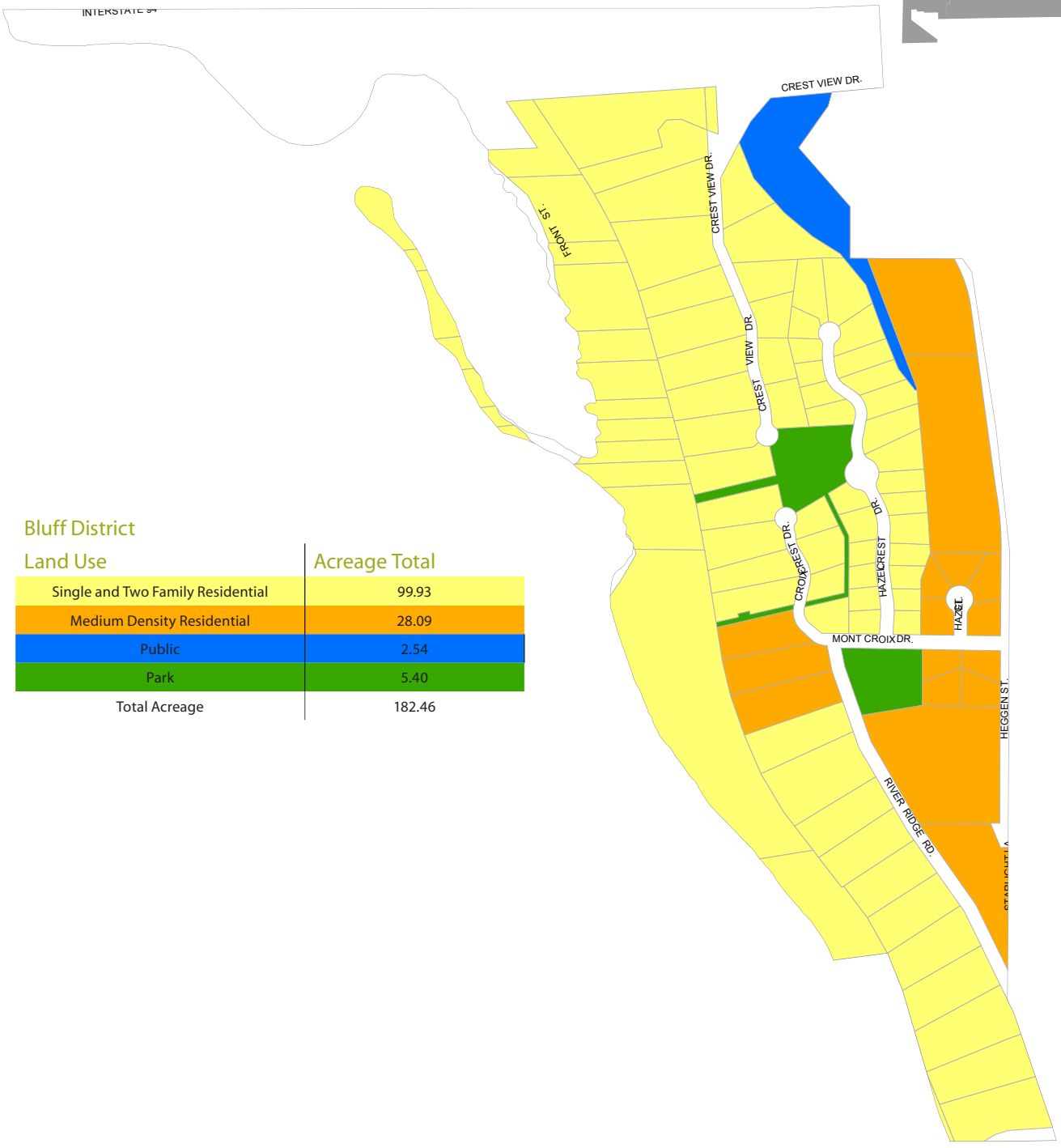
Hudson Planning District 5
Bluff District

The Bluff District is located along the scenic St. Croix River in southwest Hudson and features primarily single-family homes. The area is bounded by I-94 to the north, Heggen Street and commercial/industrial uses to the east, by the Town of Troy to the south, and by the St. Croix River on the west. The primary use in this district is single-family residential of mature character and is guided for single-family residential.

Policies

- Promote the preservation of low density (2-3 units per acre) residential development.
- Integrate residential development with existing environmental features in an effort to protect and preserve the scenic national waterway. This includes more stringent run-off standards to lessen erosion.
- Develop higher design standards for development and redevelopment of this area. These include LEED architecture standards and dark-sky standards due to the scenic location on the St. Croix River.





Bluff District

Land Use	Acreage Total
Single and Two Family Residential	99.93
Medium Density Residential	28.09
Public	2.54
Park	5.40
Total Acreage	182.46

Commercial building within the Carmichael Development.

Available space in the southwest Industrial Park.

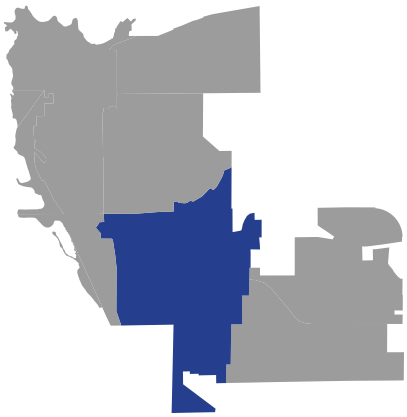
Building along Industrial Street.

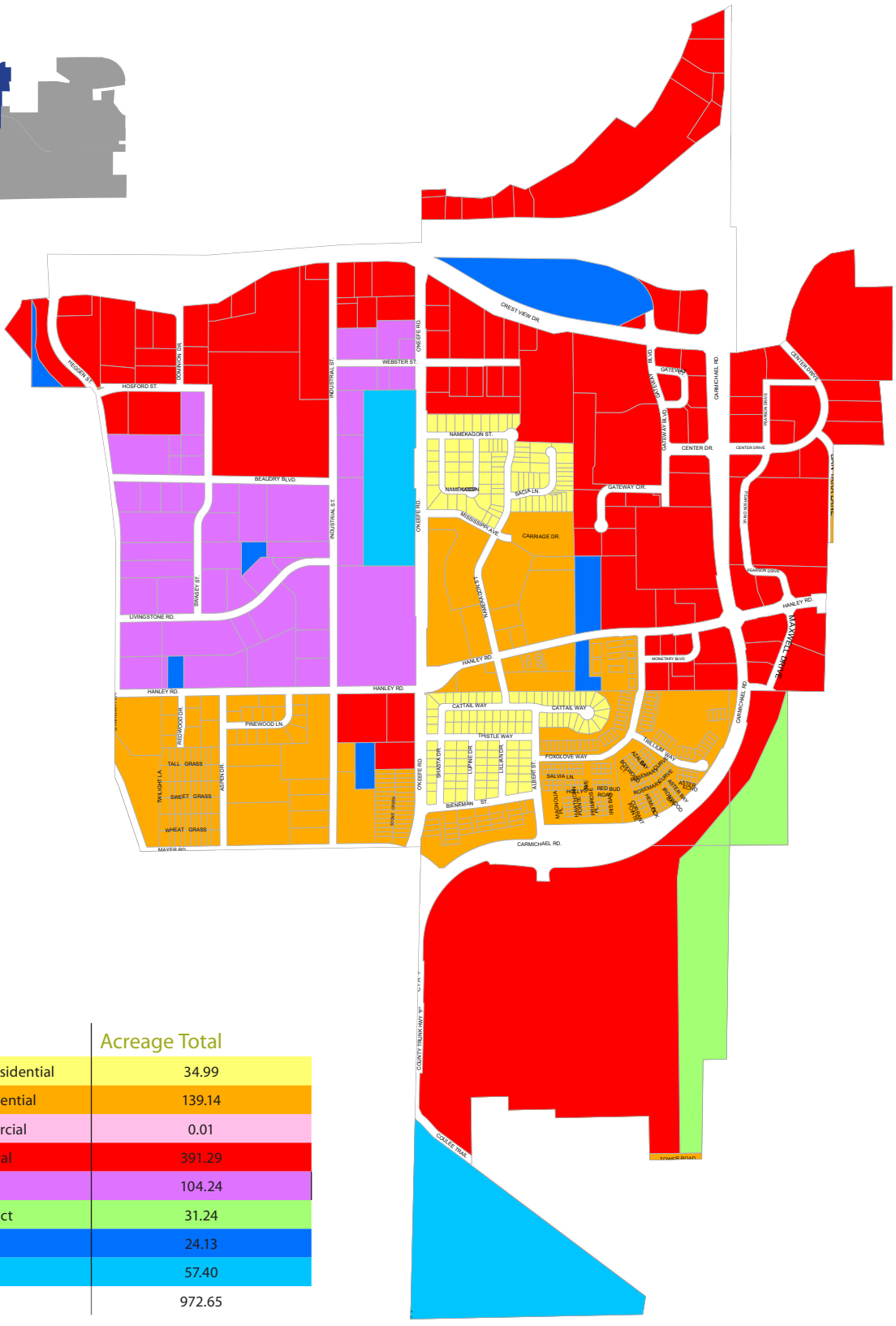
Hudson Planning District 6 Commercial District

The Commercial District is located along I-94 through the center of Hudson and features primarily commercial/industrial land uses. The area is bounded by single-family homes to the north, which are located just north of a narrow strip of commercial development along the northern side of I-94, by the Town of Hudson and the Southeast and Industrial Districts to the east, by the Town of Troy to the south, and by the Town of Troy and the Bluff District to the east. The primary use in this district is commercial/industrial and is guided for various types of commercial/industrial uses. Currently, this area has a substantial amount of vacant commercial space available for use and/or redevelopment. This vacant space includes office, retail, industrial, and special use spaces (formerly the dog track).

Policies

- Promote and expand wayfinding within this district.
- Consider desired streetscape improvements including landscaping, street lighting and traffic calming standards, as needed.
- Develop higher buffer standards for commercial and industrial sites within this district, particularly those that are adjacent to residential areas in the southern portion of the district.
- Allow secondary living quarters in commercial development located north of I-94.
- Develop shared parking or proof of parking standards for big box retailers within this district.
- Develop a comprehensive transportation plan to mitigate traffic issues off of Carmichael Road.
- Create design standards for commercial and industrial uses within this area that include energy efficient building materials, solar or wind power energy. Promote improved impervious surface coverage standards as a part of a zoning update. Recommend porous pavement and rain gardens into all new commercial and industrial developments. This would also include LEED certified buildings.





Carmichael District

Land Use	Acreage Total
Single and Two Family Residential	34.99
Medium Density Residential	139.14
Recreational Commercial	0.01
General Commercial	391.29
Industrial	104.24
Conservancy District	31.24
Public	24.13
Institutional	57.40
Total Acreage	972.65

Heritage Green is a residential development in the Southeast District.

The Red Cedar Canyon residential development.

Hudson Planning District 7
Southeast District

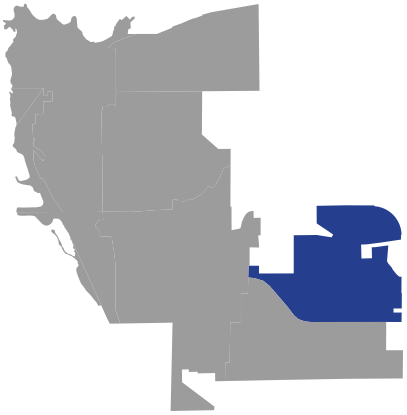
The Southeast District is located south of I-94 in the eastern portion of Hudson and features primarily low-density single-family homes in a suburban pattern. This district is bounded by The Town of Hudson to the north and east, by Hanley Road and industrial uses to the south and by the Town of Hudson and commercial and industrial uses in the Carmichael District to the west. The primary land use in this district is single-family residential and is guided for single-family residential and medium density residential.

Policies

- Encourage the preservation of low density-residential uses within this area.
- Develop a street network that can support future annexation and residential development from the east.
- Incorporate a comprehensive trail plan for this area that ties into Hanley Road and Stageline Road.

Southeast District

Land Use	Acreage Total
Single and Two Family Residential	183.78
Medium Density Residential	113.59
Neighborhood Commercial	7.51
General Commercial	26.86
Public	14.36
Park	77.02
Total Acreage	560.76



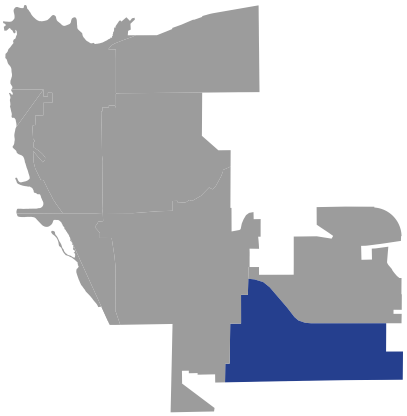
Cardinal Health

Hudson Planning District 8
Industrial District

The Industrial District is located in southeast Hudson to the south of Hanley Road. It features industrial development. The district is bounded by Hanley Road to the north, the Town of Troy to the east, by the Town of Troy to the south, and by commercial and industrial land uses within the Carmichael District to the west. This area features primarily industrial development with some commercial development and is guided for industrial development.

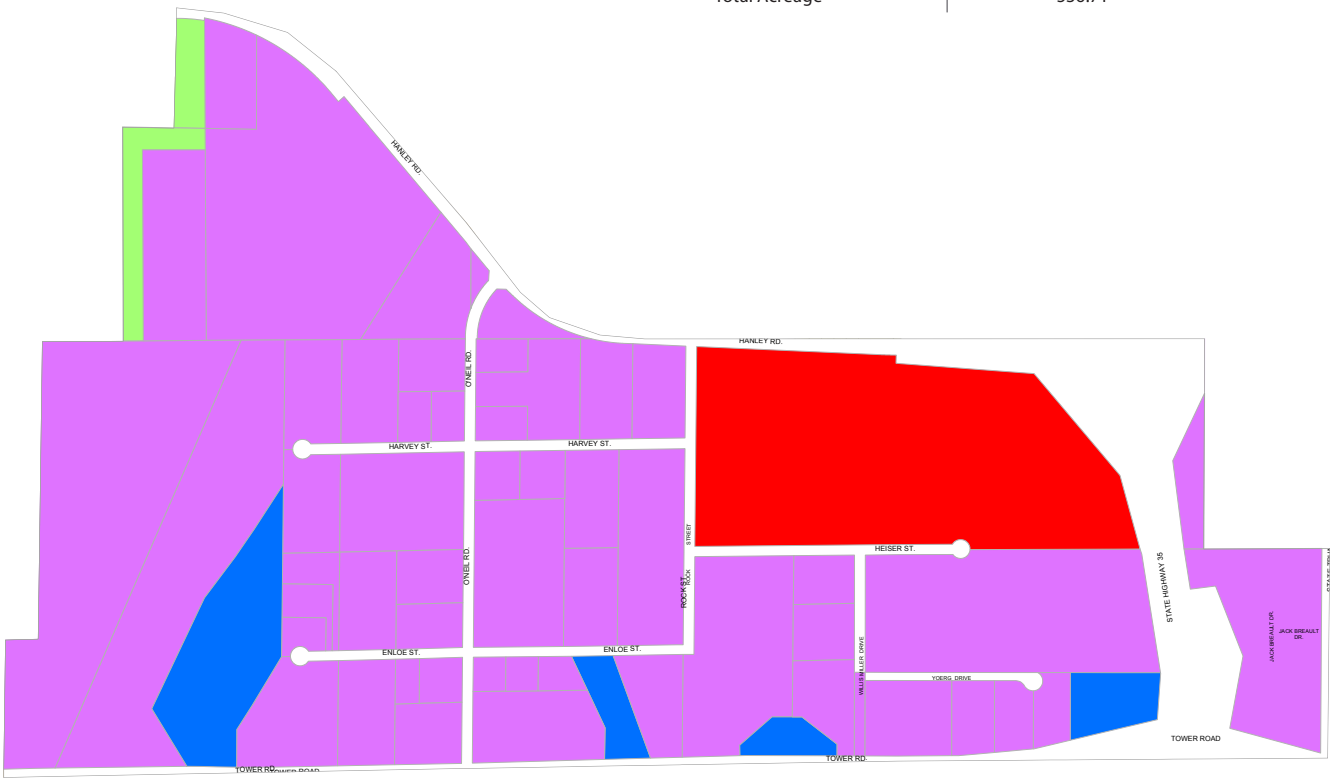
Policies

- Allow for the expansion of industrial uses within the City.
- Develop a street network that can support future annexation and residential development from the east.
- Provide buffers and/or transition areas between established residential areas and planned industrial areas.
- Establish performance standards to address compatibility issues with residential uses to the north and future development areas to the south.



Industrial District

Land Use	Acreage Total
General Commercial	64.75
Industrial	363.80
Conservancy District	7.67
Public	26.65
Total Acreage	536.71



Policies for all Extraterritorial Areas

The following policies should be considered for all five of the extraterritorial areas. Since these areas are currently outside the current city limits of Hudson, coordination and cooperation is needed with the Town of Hudson and Town of Troy. The boundaries of the extraterritorial areas are not finite and for general locational purposes only.

- Develop standards to address premature subdivisions.
- Large lot and other rural development patterns should be avoided in the extraterritorial areas in the future. If such development is allowed prior to annexation, it should only be allowed subject to a thorough review of specific plans for redevelopment when urban services are available.
- Annexed areas should be developed when possible prior to new annexations.
- Stormwater planning and related water management planning should be completed in the extraterritorial areas prior to the beginning of development.
- The City of Hudson should develop concrete plans to address existing rural subdivisions that will be surrounded by urban expansion, so that residents can gain an insight into the plans and costs for providing urban services as they face possible annexation.
- Require that new subdivisions and platting of land adhere to the street grid pattern of existing neighborhoods, and make street and sidewalk connections where appropriate.
- The City of Hudson and surrounding towns should look to cooperatively use right-of-way for trunk sewer lines, water lines, etc.
- Ensure the efficient future subdivision of land and the provision of public utilities.
- Discourage urban levels of development unless public facilities to serve development are available and sufficient.
- Cooperatively plan with neighboring jurisdictions to discourage urban-like development not connected to city services in the areas immediately outside of the Hudson city limits.
- Promote orderly annexation agreements as procedures for annexation to accommodate new development, provided that sufficient public facilities can be provided to serve new development.
- Communicate and cooperate with surrounding towns and St. Croix County on growth issues and common concerns.

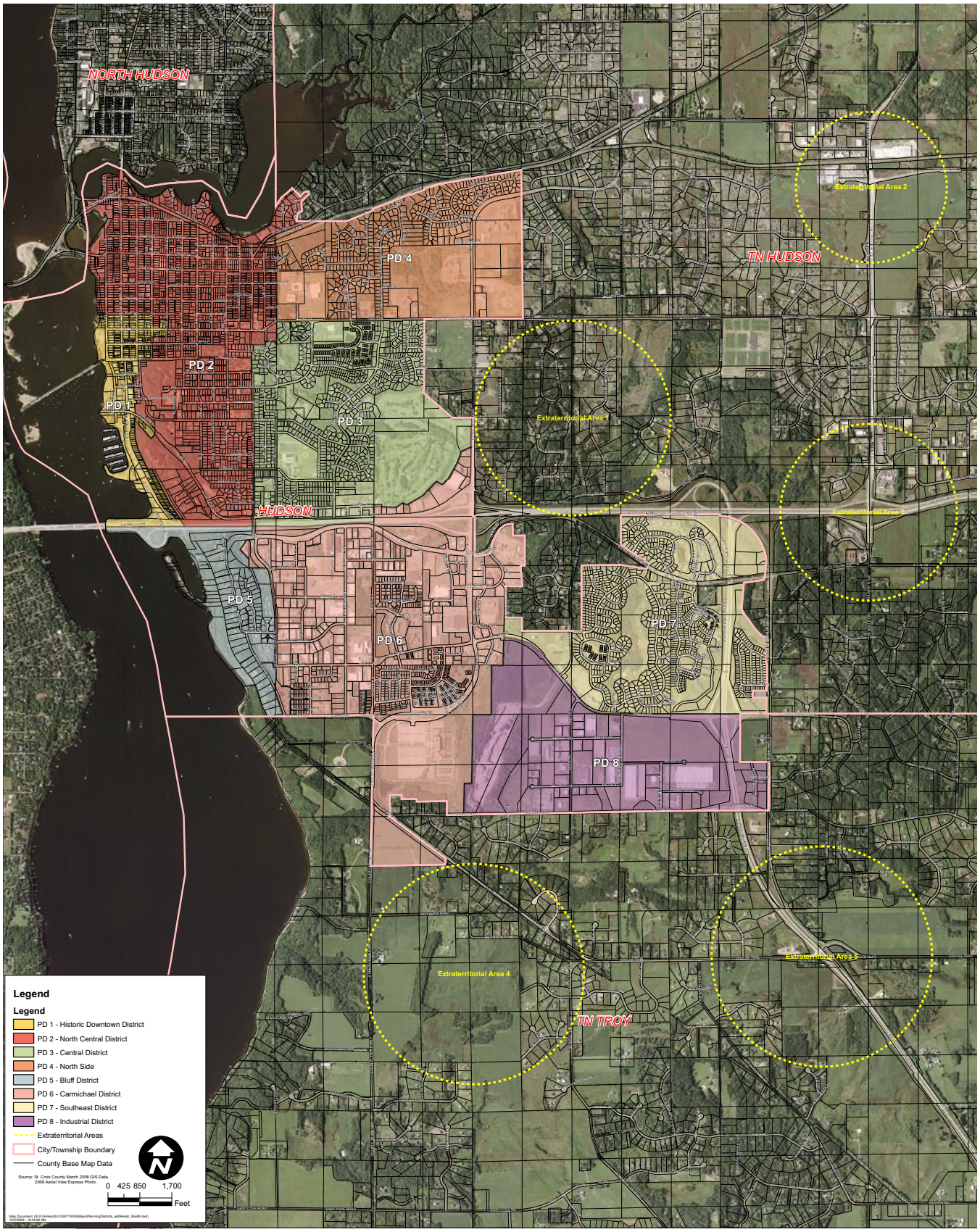


Figure 2-2: Planning District and Extraterritorial Area Map

Extraterritorial Area 1

This area is located on the eastern city limits of Hudson, north of Interstate I-94. It is currently located within the Town of Hudson and features a variety of semi-rural/ex-urban single-family residential land uses on individual septic treatment systems.

Area Specific Policies

- Work with the school district to determine a needs analysis for the existing school site south of CTH UU.
- Develop premature subdivision standards that prevent large lot fragmentation of areas east of the City of Hudson.
- Incorporate ghost platting as a part of all preliminary plat applications within Extraterritorial Area 1.

Extraterritorial Area 2

This area is located northeast of the City of Hudson near the intersection of U.S. TH 12 and County Trunk Highway U within the Town of Hudson. There are a variety of rural, single-family, and commercial/industrial land uses in this area.

Area Specific Policies

- Work with the state of Wisconsin, state of Minnesota and federal agencies on developing a needs analysis for the possible location of high speed commuter rail service within this area.
- Develop a master corridor plan for this area that allows for transit oriented development (TOD) near US Highway 12 and County Trunk Highway U.

Extraterritorial Area 3

This area is located at the intersection of I-94 and U.S. TH 12 within the Town of Hudson. There are a variety of rural, single-family, and commercial/industrial land uses in this area. There is a large concentration of commercial/industrial land uses located near the I-94 highway interchange.

Area Specific Policies

- Develop a comprehensive capacity study to determine best uses for the possible expansion of services to this area.
- Develop a master corridor plan for this area that will include a gateway center to Hudson, technical school or office or high-tech eco-office site.

Extraterritorial Area 4

This area is located in the Town of Troy south of the City of Hudson along Coulee Trail. There are a variety of rural, single-family, and commercial/industrial land uses in this area.

Area Specific Policies

- Work with the Town of Troy in developing annexation agreements for the possible expansion of services to this area.
- Develop premature subdivision standards for this area.
- Encourage ghost platting.

Extraterritorial Area 5

This area is located in the Town of Troy southeast of the City of Hudson along State Highway 35. There are a variety of rural, single-family, and commercial/industrial land uses in this area.

Area Specific Policies

- Work with the Town of Troy in developing annexation agreements for the possible expansion of services to this area.
- Develop premature subdivision standards for this area.
- Encourage ghost platting.

HOUSING

HOUSING

The city of Hudson is rich in housing types. The close proximity to the Minneapolis/St. Paul metropolitan area, combined with historical appeal and small town character has resulted in significant growth. In fact, St. Croix County is one of the fastest growing counties in Wisconsin. As a result, projections indicate that there will be a significant increase in housing units in the next twenty years. Between 2005 and 2025, it is projected that Hudson will increase its housing stock by 64 percent from 4,436 in 2005 to 7,273 in 2025. According to Sperling's Best Places, the newer housing stock has increased the median home value in Hudson to an estimated $298,000 in 2007.

As the population has increased so has the construction of new and redeveloped housing. Hudson had the greatest activity in construction during the early 2000s as the trend in home building peaked. Table 3-1 shows the increase in building permits from 2001 to May 31, 2009. Long range projections indicate that Hudson will still see a considerable amount of growth well into the future.

Housing Analysis

US Census data as well as the St. Croix County Conditions and Trends Report (2008) provide an overview of existing and future housing trends for the city of Hudson. In most cases, the city has seen a steady increase in housing trends, housing value and housing construction compared with surrounding municipalities.

Table 3-1 Building Permits Issued in Hudson

	2001	2002	2003	2004	2005	2006	2007	2008	2009 (Through May 31)
Residential Units	166	103	93	125	102	68	54	36	3
Residential Add./ Remodel	189	226	223	176	203	195	214	114	33
Accessory Buildings	17	17	16	9	21	14	8	5	2
Multi-Family Units	106	132	170	234	106	26	12	4	0
Commercial Buildings	2	8	8	13	16	8	6	2	0
Commercial Add./ Remodel	39	42	33	36	83	59	57	52	19
Industrial Buildings	3	1	2	3		0	4	0	0
Industrial Add./ Remodel	3	5	6	6	6	7	14	11	7
Institutional Bldg./ Add./Remodel	9	13	11	8	5	11	16	15	5

Table 3-2 Housing Value of Specified Owner-Occupied Units - 2000								
Municipality	Less than $50,000	$50,000 - $99,999	$100,000 - $149,999	$150,000 - $199,999	$200,000 - $299,999	$300,000 - $499,999	$500,000 or more	Median Value
Glenwood	37	147	47	14	2	0	0	$82,400
Hudson	29	292	858	464	260	90	34	$139,900
New Richmond	27	545	616	136	74	34	0	$108,100
River Falls**	9	135	290	82	11	0	0	$123,700
St. Croix County	257	2,568	4,644	3,102	1,830	534	92	$139,500

Source: U.S. Census
** Portions of River Falls located in St. Croix County Only

The median home value in Hudson was $139,900 in 2000 (Table 3-2). This was just slightly higher than the county average and the highest amongst other municipalities within St. Croix County.

Table 3-3 Renter-Occupied Units - 2000						
Municipality	Less than $200	$200 - $299	$300 - $499	$500 - $749	$750 - $999	$1,000 or more
Glenwood	9	4	61	57	8	4
Hudson	46	90	143	715	268	117
New Richmond	62	68	240	321	157	42
River Falls**	54	91	43	170	72	12
St. Croix County	241	375	987	2,334	838	274

Source: U.S. Census
** Portions of River Falls located in St. Croix County Only

Table 3-3 shows the monthly costs for renter-occupied units in 2000. Most units have $500-$749 monthly rent costs, and the majority of the units are within the higher price range. In addition, Hudson has a substantially higher amount of renter-occupied units compared with other municipalities within St. Croix County.

Table 3-4 Year Structure Built - 2000						
Municipality	1990 to March '00	1980 - 1989	1970 - 1979	1960 - 1969	1940 - 1959	1939 or earlier
Glenwood	95	56	82	17	92	152
Hudson	1,184	530	584	336	524	671
New Richmond	633	454	398	226	431	501
River Falls**	221	191	221	142	123	104
St. Croix County	6,575	4,017	4,812	1,951	2,355	4,555

Source: U.S. Census
** Portions of River Falls located in St. Croix County Only

Hudson has seen a significant amount of new home construction in the recent years (Table 3-4). In fact, about 31 percent of the total homes were built between 1990 and 2000.

Table 3-5 Units in Structure - 2000					
Municipality	1-Unit Detached	1-Unit Attached	2 Units	3-4 Units	5 or more Units
Glenwood	326	22	35	32	31
Hudson	1,980	388	185	199	1,059
New Richmond	1,551	123	162	265	507
River Falls**	482	109	48	21	304
St. Croix County	17,637	973	1,001	911	2,607
Source: U.S. Census ** Portions of River Falls located in St. Croix County Only					

Table 3-6 Housing Units - 1980 to 2000					
Municipality	1980	1990	2000	Percent Change	
				1980-90	1990-00
Glenwood	379	418	491	10.3%	17.5%
Hudson	2,055	2,634	3,831	28.2%	45.4%
New Richmond	1,665	2,025	2,657	21.6%	31.2%
River Falls**	535	715	1,002	33.6%	40.1%
St. Croix County	14,924	18,519	24,263	24.1%	31.0%
Source: U.S. Census ** Portions of River Falls located in St. Croix County Only					

The predominant housing type in the city of Hudson is the traditional single family home. Table 3-5 and Table 3-6 highlight the total number of units per structure as well as the total number of housing units. In both cases, the city of Hudson has seen the greatest increase in housing units as well as the largest number of single family units compared with other municipalities within St. Croix County.

Housing Goals and Recommendations

As new development or redevelopment occurs within the city, it will be critical that growth be developed in a comprehensive and planned manner. An adequate supply and mix of housing options for all demographics and ages is an essential aspect of any healthy community. In order to achieve quality housing development in future years, the following recommendations are provided for all housing development within the city of Hudson.

- Encourage innovative zoning and land use approaches to encourage the development of diverse and affordable housing for persons of all ages. These approaches include smaller blocks that incorporate trails and sidewalks.
- Promote mixed-use housing options along key corridors within the city. Allow for higher densities within these corridors that incorporate form-based zoning specific to these corridors.
- Establish design guidelines which encourage developments that are architecturally compatible with historic neighborhoods and are in keeping with traditional design standards.
- Encourage buildings to be designed and/or renovated in character and size with the historical nature of the city. Buildings that are out of context with surrounding buildings due to additional size or height will be discouraged.
- Define standards to regulate the bulk, height, area and density of buildings in new residential areas to create consistency with existing residential neighborhoods.
- Reduce the number of direct driveway accesses to the arterial and collector street system as part of the development and redevelopment process.
- Encourage stormwater on-site infiltration (i.e. rain gardens).

NATURAL AND CULTURAL RESOURCES

The Hudson area is blessed with an abundance of natural and geologic beauty. Glacial retreats have left the St. Croix River valley with rolling land sharp escarpments, steep hills and broad flat terraces. The St. Croix River itself is a precious resource, home to a variety of plant and animal life, as well as a source of recreation and enjoyment for residents and visitors. Protection of these resources not only allow them to be enjoyed for generations to come, but also contributes to the quality of life for Hudson residents today.

The purpose of this section is to identify areas of environmental, natural and cultural resource value. Many times these features will determine what kind of land use may occur and the intensity of that use. Past research has indicated that these areas tend to occur in linear formation to the landscape. These formations include natural resource amenities as well as scenic, recreational, and historic resource amenities. These corridors generally lie along major river and stream valleys and around major lakes and wetlands.

While there is a substantial portion of the Hudson area that is inherently suitable for urban development, other segments of the urban area have intrinsic natural value. These segments perform should be considered to be left in a natural state, or contain limitation to development such that they should not be urbanized. Preservation of significant natural resources is a legitimate goal of local government. In this way quality of life can be enhanced and maintained for Hudson area residents.

Information in regard to Natural and Cultural Resources Element are supplemented by the St. Croix County Conditions and Trends Report, West Central Wisconsin Regional Planning Commission, November 9, 2008. Also a valuable resource for the review of natural resources is the St. Croix County Resource and Land Use Atlas DVD-ROM which contains resource maps for St. Croix County and each municipality.

Topography

The topography of the city of Hudson and the surrounding areas ranges from gently rolling to steep ridges along stream valleys such as the St. Croix and Willow Rivers. Elevations range from about 675 to over 900feet above mean sea level. The topography of the city of Hudson restricts development opportunities

including the location of streets. Development of slopes greater than 20 percent is not allowed in the city of Hudson for projects that will be served by the city of Hudson municipal sanitary sewer system.

Geology

The Hudson area, like all of St. Croix County, is part of the geographical province call the Western Upland, which extends from southern Polk County to Grant and Rock Counties in southern Wisconsin. The Hudson area and St. Croix County is underlain by two ground water provinces; the Drift-Paleozoic and the Valley Alluvium. Both aquifers are generally productive.

The northwest part of the Hudson area was formed by action of the Superior lobe of the Wisconsin Glaciation. If formed a typical end moraine, a ridge with rolling to hummocky surface, kettles that may contain water or marshes. The southeastern portion of the Hudson area was formed by the pitted outwash deposited by the front of the Superior lobe.

The outwash plain is stratified gravel, sand, silt, and clay deposited by water from the melting of the glacier. Pits or kettles are commonly found in the plain, the result of melted, buried blocks of ice. The geology of the southeastern section of the Hudson area is ground moraine. This is characterized by a gently undulating plain with moderate relief. Ground moraine was deposited under glacial ice as a blanket of unsorted rock from clay to boulders.

The combined thickness of unconsolidated glacial drift, alluvium and marsh deposits ranges from zero, where bedrock crops out to more than 450 feet to the northwest of the Hudson. Thickness is greatest where glacial material fills bedrock valleys and in hills formed by end moraines.

Two geologic formations are present in the Hudson area; the Prairie du Chien group and the Trempealeau formation. The Prairies du Chien group consists of dolomites and is sandy in some zones. This group ranges in thickness from 0 to 200 feet and yield small to moderate amounts of groundwater.

The Trempealeau formation consists mainly of sandstone and is commonly high in iron, ranges from 0 to 800 feet in depth and yields moderate amounts of high quality water.

Soils

The most fundamental criteria for development is the nature of the soils. Much of the Hudson area is underlain by glacial outwash sands and gravel, which may settle significantly under the weight of buildings. Most soils north of I-94 possess moderate limitations for supporting buildings with foundations. The area south of I-94

and west of Carmichael Road possess very few limitations.

Groundwater

Groundwater is an important natural resource in the Hudson area. The source of the city of Hudson's potable or drinking water is groundwater. The protection of the area groundwater is of high priority to any community. This may be achieved be by modifying or prohibiting certain types of development where contaminants may reach the groundwater. For a community such as Hudson that means limiting concentrations of development in areas that are most susceptible to contamination. The western and northwestern areas of St. Croix County have the highest groundwater susceptibility ratings according to the Wisconsin Department of Natural Resources Groundwater Contamination Susceptibility Model used to estimate the susceptibility of the groundwater based on particular natural resource characteristics.

Watersheds and Surface Waters

The St. Croix River and Lake St. Croix located to the west of the city of Hudson is the largest surface water in St. Croix County. The St. Croix River is designated as a national scenic riverway. Through this designations the National Park Service and Wisconsin Department of Natural Resources works with local jurisdictions to manage and protect the riverway. Other surface waters within the St. Croix River Basin are the Willow River and Lake Mallalieu.

Outstanding and Exceptional Resource Waters

The St. Croix River is designated by the Wisconsin Department of Natural Resources as both an Outstanding and Exceptional Water Resource. The outstanding resource designation extends from the northern corporate limits of the city of Hudson north to the Polk County border. The exceptional resource designation extends from the northern corporate limits of the city of Hudson southerly to the Pierce County border. Part of the Willow River located north and east of the city of Hudson also is designated as an exceptional resource.

Point Source Discharges

The city of Hudson waste water treatment plant discharges to the St. Croix River. It is important that the city of Hudson continue to monitor, as possible, discharges from the municipal waste water treatment plant and storm sewer systems.

Shorelands, Floodplains and Wetlands

Three areas potentially sensitive for development include shorelines, floodplains and wetlands. The shorelands and floodplains within the city of Hudson are located along the eastern bank of the St. Croix River and the southern bank of Lake Mallalieu. The city of Hudson administers local shoreline and

floodplain ordinances to restrict the impacts of development on the shorelines and floodplains located within the city. Development within floodplains may be assessed through the use of the Flood Insurance Rate Maps (FIRM) that became effective in March 2009. There are limitations to the accuracy of the FIRMs due to the scale of the maps.

Wetlands are an important resource to a community as they serve to store storm water, filter pollutants, replenish groundwater supplies and maintain stream flows. Wetlands are defined by the Wisconsin Department of Natural Resources as an area where water is at, near, or above the ground surface long enough to be capable of supporting aquatic vegetation and have soils indicative of wet conditions.

Steep Slopes

Steep slopes are generally considered as slopes having a grade of 12% or greater. The city of Hudson restricts grading on slopes greater than 12% in the Lower St. Croix Riverway and greater than 20% in the corporate limits to conform to the standards of the adopted Hudson Area Sewer Service Plan. The limitations on the disruption of steep slopes is to minimize the impacts of development in regard to storm drainage, flooding and resulting soil erosion and contamination of the area water resources.

Forest and Woodlands

Forest and Woodlands provide wildlife and plant habitats, an environment for recreational activities and scenic natural beauty. The city of Hudson is a resource for forest and woodlands although it is a community that is developed at urban standards. The woodland areas typically are experienced in areas of steep slopes along the bluffs of the St. Croix River and Lake Mallalieu and the steep slopes located east of the Carmichael Road and south of I-94.

Parks and Recreational Resources

The city of Hudson updated the Parks and Outdoor Recreation Plan in 2009.

Cultural Resources

The Hudson community has a rich historic heritage that is well preserved in a myriad of historically and architecturally important structures throughout the communities of Hudson and North Hudson according to Buildings from the Past: An Architectural Survey of Hudson and North Hudson, August, 1983. The detailed surveys are kept on file at the Hudson Library history room and are available for review upon request.

According to the National Register of Historic Places, St. Croix County has 28 historic properties and four historic districts of which 10 of the historic properties and two districts are located in the city of Hudson:

1. Hudson Public Library, 304 Locust Street
2. Herman L Humphrey House, 803 Orange Street
3. August Johnson House, 427 St. Croix Street
4. Dr. Samuel C. Johnson House, 405 Locust Street
5. Lewis – Williams House, 101 Third Street
6. Samuel T. Merritt House, 904 Seventh Street
7. John S. Moffat House, 1004 Third Street
8. Opera House Block, 516 Second Street
9. William H. Phipps House, 1005 Third Street
10. St. Croix County Courthouse, 904 Third Street
11. Second Street Commercial District, First Street, Second Street, Walnut Street and Locust Street
12. Sixth Street Historic District, Sixth Street between Myrtle Street and Vine Street.

One other district was nominated to be included in the National Register of Historic Register including the Third Street historic residential neighborhood and the Vine Street historic residential neighborhood. Both areas are referred to by local residents as historic districts because of the architectural quality and number of residences in these neighborhoods.

Also in the city of Hudson 534 items have been identified as places or objects that have been identified as having historic value and are on the Wisconsin Historical Society's Architecture and History Inventory.

Natural and Cultural Resources Goals and Policies

Goal: To protect, conserve and enhance natural and cultural resources within the Hudson area for community's long-term environmental benefit.

Policies:

- Continue to implement and administer local, state and federal programs to preserve, conserve and maintain and further enhance natural ecological systems including lakes, rivers, wetlands, storm drainage areas and aquifers.
- Protect the scenic and natural resources of the St. Croix River

and Lake Mallalieu from negative impacts of development through the administration and enforcement of the shoreline, floodplain and national scenic riverway regulations.

- Protect St. Croix River and Lake Mallalieu surface waters from intrusive vegetation that may disturb the natural ecosystem.
- Strictly control development within the designated floodplain areas.
- Pursue opportunities to reduce and control noise and light pollution.
- Adopt tree replacement and reforestation programs.
- Discourage development on soils that are unsuitable for development.
- Regulate the quarrying of non-metallic resources such as sand, dirt, gravel and peat to mitigate potential environmental and visual impacts such as dust, noise and erosion on neighboring properties.
- Expand the community's environmental education and awareness program to include the use and or disposal of fertilizers, hazardous wastes, pesticides and the use of rain barrows, rain gardens and other best management practices that are related to water quality.
- Encourage and promote public and private recycling programs.
- Promote sustainability concepts that address energy use by the city of Hudson and local residents and businesses including vehicle and building energy use including programs such as Leadership in Energy and Environmental Design (LEED).
- Promote and preserve the historic values of the city of Hudson through the education of local residents and businesses and the implementation of development standards that provide for the protection of historic sites and buildings and provide for compatible development or redevelopment within the downtown and residential historic areas.

TRANSPORTATION

TRANSPORTATION

Introduction

The Transportation Chapter for the city of Hudson is intended to be a working document that will provide the community with direction for the future transportation system to adequately serve the needs of its residents and support the regional transportation system. This Chapter of the Comprehensive Plan will serve as a reference for city officials, planners and engineers to utilize as they review development proposals, plan capital improvement project budgets and consider future transportation system improvement needs.

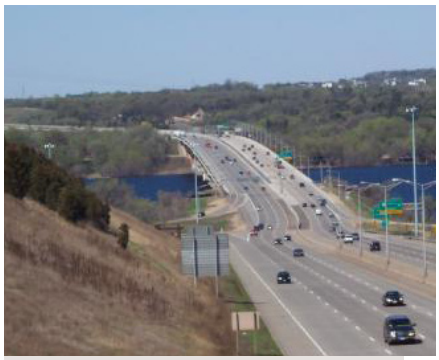
Transportation facilities both link and, in some cases, separate land uses within the community. This chapter of the Comprehensive Plan includes the following:

- Describes the historical and existing conditions of the transportation system in the city of Hudson.
- Identifies existing and future transportation needs.
- Establishes goals, policies and recommendations to address those transportation needs.

Existing Conditions

The city of Hudson and the greater Hudson area is the fastest growing population hub in Western Wisconsin, influenced by the growth of the Twin Cities Metropolitan area. The area's connection and proximity to I-94 have encouraged this link to the Twin Cities and the resulting growth. While providing good access to the region, I-94 also bisects the city of Hudson creating a barrier for travel between the north and south sides of the corridor.

The city of Hudson has several physical amenities which are wonderful assets to the community that also present interesting challenges to the transportation system. These include its prime location on the eastern bank of the St. Croix River, Lake Mallalieu and the Willow River to the north, and the bluff topography. Each of these, while extraordinary community assets, are natural barriers in the city's transportation network. Local roadway continuity is interrupted throughout the city, focusing traffic onto a few routes.



I-94 is a principal arterial through Hudson.

Regional System

Interstate 94 Corridor

Interstate 94 is a primary roadway in the city of Hudson, which provides the city access to the region. I-94 is a Principal Arterial freeway extending east to Milwaukee and beyond, and west through St. Paul/Minneapolis and beyond. 2007 traffic volume information from the Wisconsin Department of Transportation (WisDOT) listed an Average Annual Daily Traffic Volume (AADT) of 80,000 on the St. Croix River Bridge.

The I-94 Bridge crosses the St. Croix River linking Wisconsin to Minnesota. The nearest river crossing is the Stillwater lift-bridge located between Houlton and Stillwater, approximately 7 miles to the north. This bridge is tentatively scheduled for replacement in 2014.

Access across and to I-94 are equally important to the city of Hudson. Many residents of Hudson travel to and from the Twin Cities metropolitan area daily via I-94. Others in the nearby region travel to Hudson via I-94 as it is a hub for western Wisconsin with many employment opportunities. Retail, industrial, residential and commercial land uses are located on both sides of I-94 requiring many residents to travel across the freeway for goods and services. At this time however, there are only two connections across and two full accesses to the freeway. Compounding this limitation is that Carmichael Road serves both functions creating a bottleneck in the city transportation system. The congestion currently experienced along Carmichael Road in the I-94 area and related freeway access concerns will be addressed as part of this plan.

St. Croix County Regional Roadways

Vine Street /County Trunk Highway UU

Vine Street is also designated as County Trunk Highway (CTH) UU and extends through the city between STH 35/2nd Street to STH 12 and beyond. Vine Street is one of two east/west connections north of I-94 in the city (St. Croix Street/Baer Drive/Old CTH A is the other). Vine Street provides access to several of the city's residential neighborhoods and the High School. Vine Street between downtown Hudson and Carmichael Road is classified as a Principal Arterial on the current WisDOT Functional Classification Map. East of Carmichael Road, CTH UU is classified as a Minor Arterial. In 2006, Vine Street had AADT's of 4,800 at STH 35/2nd Street and 8,900 at Grandview Drive.

CTH A

CTH A provides a connection for Hudson to the north. Beginning at the current east City limits, the two-lane roadway travels around the south side of the Union Pacific Railroad (formerly Chicago Northwestern) and turns northward following the Willow River into New Richmond.

State Trunk Highway 35

North of I-94, State Trunk Highway 35 (STH 35) travels through downtown Hudson as 2nd Street. There is a lane of traffic in each direction and on-street parking on both sides of 2nd Street in the downtown area. The speed limit is 25-mph north of Buckeye Street. There are four lanes of traffic south of Wisconsin Street to the I-94 interchange. The speed limit between the interchange and Buckeye Street is 45-mph. To the north, STH 35 provides regional access to locations along the St. Croix River.

STH 35 is a Principal Arterial and critical route in the Hudson transportation network. North of I-94, STH 35 provides one of the City's two continuous north/south routes (Carmichael Road is the other located approximately 1-½ miles to the east). STH 35 is also one of three locations in the area to cross the Willow River.

STH 35/2nd Street is the main street through downtown Hudson with many thriving commercial establishments located along its spine generating significant parking and pedestrian activity. While being the sign of a healthy downtown, this activity limits the capacity of the roadway. The function of STH 35/2nd Street as a connection to downtown Hudson and one of few connections to the region north of the Willow River creates a traffic volume demand of 12,600 vehicles per day (WisDOT, 2006). Improvements to the operation of STH 35/2nd Street are sought by the city to enhance the downtown experience for all users and improve the flow and safety of traffic.

East of I-94 Exit 1, STH 35 travels east and then south through Hudson to River Falls. The roadway is a divided four-lane expressway along this segment and has two interchanges in the city of Hudson, one at I-94 Exit 1 and the other at Hanley Road.

Looking toward 2nd Street in downtown Hudson.

Local Street System

Carmichael Road

Carmichael Road provides one of two continuous north/south routes through the city connecting CTH A on the north and CTH F south of Hudson. As discussed above, this road is a primary access to and across I-94 creating significant traffic on the roadway. Carmichael Road is a six lane divided roadway from the I-94 interchange area south to Center Drive with dual turn lanes at many locations. Further south, the roadway transitions from a four-lane divided roadway to a two-lane roadway as CTH F near Coulee Trail at the city's southern limits. On the north side of the city, Carmichael Road is a two-lane facility with turn lanes at major intersections transitioning to a four-lane road from south of Deer Haven Drive to the I-94 interchange.

Carmichael Road is one of two connections across I-94 and one of two full accesses to I-94 in the city of Hudson. As such, Carmichael Road serves regional and local trip purposes and is classified as a Principal Arterial. The Carmichael Road corridor provides regional access to the majority of the city's non-downtown commercial, institutional and industrial land uses. Commercial land uses are concentrated at the Carmichael Road/I-94 interchange and the I-94 frontage roadways (Coulee Road and Crestview Drive). The 2006 AADT was 29,900 north of Crestview Drive.

The spacing between the I-94 ramp terminals and the Crestview Drive and Coulee Road intersections is 535-feet and 450-feet, respectively. The intersection spacing and the volume of turning traffic through this segment of Carmichael Road requires a well designed signal coordination plan for the intersections to operate at optimum efficiency. Though there have been attempts to improve operations along Carmichael Road in the past with modifications to traffic signals and geometry, motorists continue to report excessive stopping and long queues of traffic.

The intersection spacing and the volume of turning traffic through this segment of Carmichael Road requires a well designed signal coordination plan for the intersections to operate at optimum efficiency.

Carmichael Intersection at Coulee Road.

11th Street/Heggen Street

The 11th Street/Heggen Street corridor provides north/south connectivity through Hudson, including it's crossing of I-94. This two-lane roadway is designated a Minor Arterial and reported AADT's in 2006 were 9,000 at the I-94 crossing and 4,600 at Summer Street. The reported AADT in 2004 at Hosford Street was 5,300. The intersections with Coulee Road and Crestview Drive are signalized and include some turn lanes. A strong travel pattern exists between downtown and this I-94 crossing via Coulee Road which intersects STH 35/2nd Street at Buckeye Street.

North of the freeway, 11th Street provides access to residential neighborhoods and is fronted by many driveways. It is residential in character and with Wisconsin Street, serves as a local reliever route to STH 35/2nd Street.

South of I-94, Heggen Street provides access to many industrial and commercial businesses in the industrial parks as well as some residential neighborhoods. Heggen Street terminates at Hanley Road.

Hanley Road

Serving as an east/west connection on the south side of Hudson, Hanley Road is a two-lane roadway west of Carmichael Road and a four-lane roadway from east Carmichael Road to STH 35 that provides access to newer residential development and industrial commercial land uses. Hanley Road is listed as a Minor Collector in the current plan between Heggen Street and O'Keefe Road and a Collector street through its interchange with STH 35 South. There are still undeveloped parcels along Hanley Road near STH 35 which are zoned for general business and industrial land uses.

Hanley Road provides access to newer residential development and industrial commercial land uses.

Coulee Road and Frontage Roads

Coulee Road provides a direct connection between the downtown and the commercial and industrial area on the hill. From the intersection of 2nd Street and Buckeye Street in the downtown, it travels uphill and then along the north side of I-94 to 11th Street and Heggen Street. East of 11th Street, Coulee Road continues as the north I-94 Frontage Road with direct property access to numerous businesses and the entrance ramp connection to westbound I-94 at 14th Street. It intersects with Carmichael Road just north of I-94 as the northernmost signalized intersection along Carmichael Road. The Frontage Road continues east of Carmichael Road, primarily as access to a residential area.

Crestview Drive serves as the south Frontage Road for I-94, again having many direct property accesses. It connects to Heggen Street on the west and Carmichael Road on the east. Traffic signals are in place at major intersections. It continues east of Carmichael Road as Stageline Road and then as CTH N into adjacent townships.

Other Streets

Hudson's transportation system includes many other streets that function as collector or similar streets either by design or default. O'Keefe Road, Grandview Drive, St. Croix Street/old CTH A, 11th Street, Wisconsin Avenue, and Laurel Avenue are a few of the longer segments. Other shorter segments of streets carry heavier traffic volumes as they move through the system bypassing several transportation barriers.

Coulee Road in front of the commercial area on the hill.

Transportation Data

Commuting Patterns

The city of Hudson and surrounding area have a strong commuting pattern to and from the Twin Cities metropolitan area along the I-94 corridor. Review of directional hourly volumes along I-94 confirms that the freeway is used as a radial commuting route to the Twin Cities. Eastbound traffic volumes have a strong afternoon peak and little morning peak and the opposite is the case for traffic volumes in the westbound direction. The 2000 Census data for the city of Hudson indicate that of those residents who commute to work, 57-percent commute to Minnesota. The mean travel time for commuters was reported at 24.3 minutes, also indicating travel outside the immediate Hudson area.

STH 35 South and CTH F are also used as commuting routes for travel to and from River Falls and the Prescott area respectively. STH 35 North and CTH A are routes within the city used for travel to and from the cities of North Hudson and New Richmond respectively. Carmichael Road and STH 35 provide access to I-94 and carry large volumes of commuter traffic. The westbound entrance ramp at 14th Street is also heavily used by I-94 commuters during the morning peak.

The 2000 Census also found that of the 4,662 workers age 16 and over who reside in the city, 86 percent drove alone while 7.7 percent carpooled. At a recent meeting, WisDOT representatives indicated a desire to construct another park and ride lot with 200 spaces near the Carmichael Road interchange. There is currently a park and ride lot in the northwest quadrant of Carmichael Road and I-94.

The City of Hudson and surrounding area have a strong commuting pattern to and from the Twin Cities Metropolitan area along the I-94 corridor.

Table 4-1 Historical Daily Traffic Volumes - I-94 River Bridge		
Year	Minnesota Daily Volume	Wisconsin Daily Volume
1978	28,900	(1979) 33,640
1980	25,500	(1979) 33,640
1982	29,000	31,540
1984	34,000	
1986	34,000	29,200
1988	40,400	40,420
1990	44,000	45,070
1992	50,000	
1994	53,000	54,600
1996	55,000	55,200
1998	63,000	66,200
2000	69,000	72,400
2002	77,000	(2003) 67,300
2004	82,000	(2003) 67,300
2006	82,000	(2005) 67,300

Traffic Volumes

Historical

Traffic volume data reviewed back to the 1960s revealed some trends, but also a lack of trends at other times and locations. As expected, volumes on the I-94 Bridge over the St. Croix River have continuously grown (Table 4-1). Volumes from WisDOT and Mn/DOT correlated very well from 1976 to 2000 with growth from 22,000 to 70,000 vehicles per day. Mn/DOT counts show continued growth to 82,000 in 2006 while WisDOT maps showed only 67,000 vehicles per day. Table 4-1 provides the historical traffic volumes on I-94 over the St. Croix River (taken from WisDOT and MnDOT sources).

Volumes east of STH 35 (Exit 1, to downtown) are consistently and slightly lower than those on the river bridge, showing a pattern of little growth in downtown volumes and/or continued growth of traffic movement between downtown and the area east on I-94. A comparison of the volumes east of the STH 12 interchange and at the St. Croix River Bridge shows an increasing volume difference. In 1976, the volume difference was only 7,000 vehicles per day. By 1982, the difference grew to 17,000 and in 1990, the difference was 24,000. In 2000, the difference had grown to over 30,000. Table 4-2 provides historical traffic volumes along I-94

Table 4-2 Historical Daily Traffic Volumes - Interstate 94										
Year	St. Croix River		East of STH 35		East of Carmichael		East of STH 12		East of STH 65	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1976	10,940	11,520	12,470	12,590	8,670	9,900	8,030	7,240	7,480	7,240
1979	17,300	16,340	13,530	13,800			8,700	9,760	8,310	9,130
1982	15,580	15,960	13,300	13,240	11,450	12,620	6,870	7,660	7,470	7,990
1986	14,630	14,570	14,060	14,360	12,430	13,810	7,670	6,760	7,420	7,090
1988	20,350	20,070	17,460	17,690	15,670	15,070	9,440	9,030	8,830	8,350
1990	22,880	22,190	19,250	19,140	16,630	15,980	10,800	10,520	9,910	9,720
1994	26,800	27,800	25,800	25,100	19,300	17,800	12,700	12,000	13,600	12,400
1996	27,100	28,100	26,100	25,400	19,500	18,000	12,800	12,100	13,800	12,500
1998	33,200	33,000	22,300	24,800	17,600	19,000	15,500	15,500	15,300	14,700
2000	36,400	36,400	31,800	31,800	33,800	26,000	19,900	19,800	18,400	19,700
2003	33,900	33,400	32,900	32,200	25,800	25,600	19,400	19,200		
2004							22,600	18,200	22,400	19,400
2005	67,300*	*	65,100*	*						
2006			50,400*	*	41,100*	*	35,500*	*	31,800*	*

* volumes for 2005 and 2006 are for traffic in both directions, previous years were split by direction

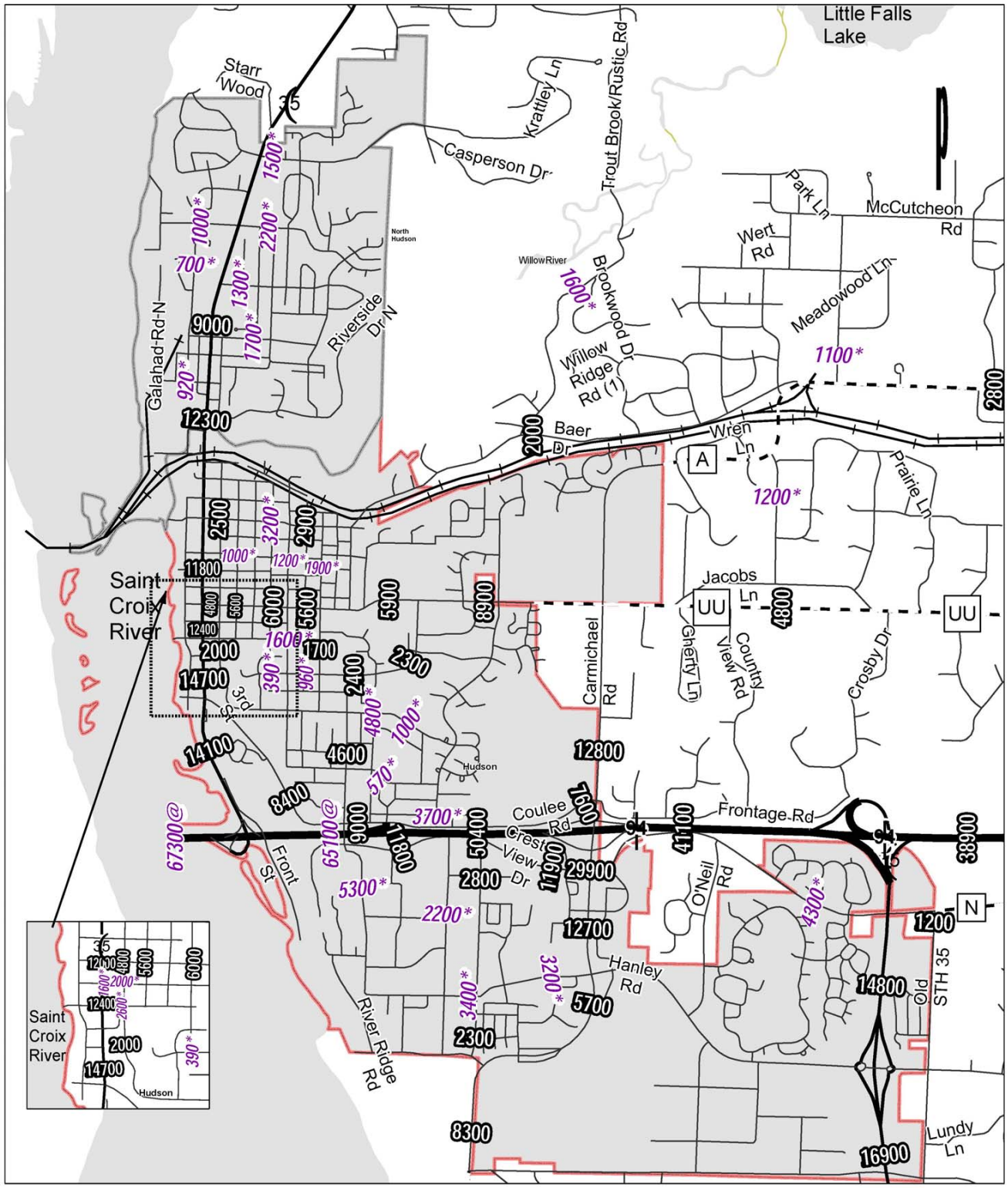


Figure 4-1: 2006 Annual Average Daily Traffic (Source: Wisconsin Department of Transportation)

The downtown area shows a lack of traffic volume patterns. In 1988, the volume on STH 35 south of Vine Street was just under 14,000 vehicles per day. The volumes grew to 15,000 in 2000, and then dropped with the latest maps showing volumes under 13,000 south of Vine Street and under 15,000 north of Buckeye Street. The relatively stable traffic volumes for the past 20 years at the downtown location is consistent with the lack of change in volume difference on I-94 either side of the downtown interchange.

As expected, the volumes on Carmichael Road have dramatically increased, consistent with the growth of high traffic generators in the area. It is difficult to track the growth because of changes in the road system and seemingly inconsistent count locations.

Existing

The 2006 Hudson area traffic volume map is shown in Figure 4-1. Many of the volumes are referenced in the text. The flow of traffic to I-94 and across the river is very evident. Reliance on the Carmichael Road interchange area is dramatically shown. The full impact of the new connection of CTH A to Carmichael is not yet apparent in the counts.

Forecast

Traffic volumes in the future are anticipated to increase in virtually all corridors due to both additional locally generated traffic and through traffic from the region. Growth on I-94 will probably continue at a similar rate as in the past due to continued regional development. Streets such as Crestview Drive and Coulee Road will have traffic volume growth directly related to nearby development. Carmichael Road and Vine Street will have traffic growth reflecting both city and regional development.

WisDOT has just completed the first draft of traffic volume forecasts on several roads in the Hudson area for the years 2015 and 2030. These have not yet been reviewed at the city level and some of the forecasted volumes will need some adjustments. The forecasts need careful scrutiny as they may reflect past traffic patterns and counts which contained some questionable data as explained in the following paragraphs.

WisDOT forecasts indicate a 50 percent growth in traffic on the I-94 Bridge over the St Croix River, to a volume in 2030 of 122,800 ADT, an increase of 42,500 vehicles per day. East of Carmichael Road, the forecasts are for the volumes to increase from 41,100 to 92,460, an increase of 51,360 vehicles per day or 125 percent. This could indicate a large increase in traffic from western Wisconsin traveling to Hudson for employment or retail purposes. Or it could be based on the I-94 volume patterns discussed in conjunction with Tables 4-1 and 4-2.

WisDOT forecasts for 2030 on STH 35 in the downtown area show 16,000 to 17,000 vehicles per day, not much higher than the volumes counted in the late 1990's and consistent with the historical patterns cited previously. Volumes on other streets in the Hudson area are forecasted to grow about 34 to 37 percent by 2030. Some adjustments to forecasts for individual streets, especially in built up areas, will need to be made.

Once the volume forecasts have been reviewed and agreed on, they should be used to assist in planning for roadway improvements and evaluating development proposals. The forecasted volumes do not reflect any specific large traffic generating developments. When such a development is proposed, the traffic impacts of the development should be determined, the forecasts modified and the transportation system should be brought into balance with the land uses and traffic generated.

Crash Data

The Hudson Police Department compiled crash numbers for intersections in Hudson for a 5 year period from 2004 through 2008. As expected, the Carmichael Road corridor intersections were among those with the highest number of crashes.

The interchange area of I-94 and Carmichael Road, considered as one area in the tabulation but including both ramp intersections, had the highest number of crashes in the four year period.

Only the downtown intersection of 2nd Street with Coulee Road/ Buckeye Street joined the Carmichael Road intersections in the list of the top five intersections with the highest number of crashes, ranking third.

Major Traffic Generators

The City of Hudson has several areas of concentrated commercial and industrial development. The largest of these areas is the Carmichael interchange area. Along Coulee Road on the north side of I-94, this includes Target, Family Fresh Market, a bank and smaller retail stores in the Plaza 94 Mall or as independent structures. Typical trip generation for a Target store of average size is 6,000 trips per day, while an average size grocery store typically generates up to 5,700 trips per day.

The area south of I-94 includes Hudson Memorial Hospital and clinics, Walmart, Home Depot, County Market, Menards, Fleet Farm and many smaller retail and industrial uses. The hospital and clinics have visitors, patients and employees which could generate a significant number of trips per day. Walmart and County Market have approximately the same generation as estimated for the Target and Family Fresh Market above (6,000 and 5,700 respectively). The industrial parks could generate many trips per day, especially during morning and evening peak hours.

The City of Hudson Police Department compiled crash numbers for intersections in Hudson for a 5 year period from 2004 through 2008. As expected, the Carmichael Road corridor intersections were among those with the highest number of crashes.

The City of Hudson has several areas of concentrated commercial and industrial development. The largest of these areas is the Carmichael interchange area (Exit 2).

North of CTH UU along Carmichael Road is the St. Croix County Government Center and the Hudson Elementary School. The government center includes many of the county government offices and law enforcement facilities.

Downtown Hudson, as the city's central business district, is a major generator of traffic with a concentration of many retail, restaurant, entertainment and commercial/office businesses, as well as city facilities.

Other major generators of area traffic are the YMCA, high school, the St. Croix River and marinas in the summer, a growing commercial strip along north Carmichael Road and development at the STH 12 interchange.

Roadway Functional Classification System

Background

As part of a comprehensive plan, a hierarchy of roads needs to be developed. This will identify the purpose of specific road segments and provide guidelines for their operation. Roads are placed into functional categories based on the degree to which they provide access to adjacent properties and provide mobility to through traffic. The hierarchy will include roads which are primarily oriented to the movement of traffic and mobility which are called Principal Arterials. At the other end of the hierarchy are Local Streets which serve primarily as access to property and mobility is limited to getting traffic to a Collector Street.

The adjacent schematic drawing (Figure 4-2) shows a typical general layout of a road system. The freeway is a Principal Arterial with limited access and a primary purpose of carrying traffic in the region. Arterial streets carry traffic from neighborhoods or businesses through the area to Principal Arterials or other neighborhoods or businesses. They have limited access, usually only at intersections with Collector or Arterial Streets. Collector Streets are just that; they collect traffic from local streets and bring it to Arterials. They have regular intersection access and limited direct property access. Local Streets provide access to properties.

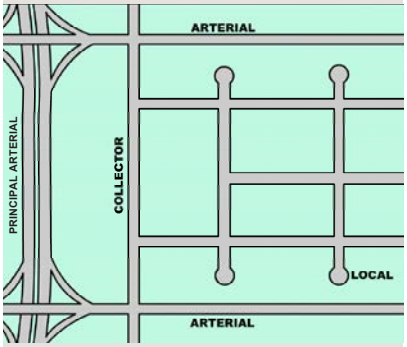


Figure 4-2: Functional Roadway Classification

Development of a Functional Classification System is important for both planning and operation of a transportation network. The definitions provide guidelines for development along a roadway in terms of access as well as anticipated traffic volumes and composition. Design criteria are provided which should reflect anticipated traffic volumes and use. Traffic controls (traffic signals, signs and markings) should reflect the traffic use of the road.

Figure 4-3 shows the varying emphasis of mobility and access in the hierarchy of streets.

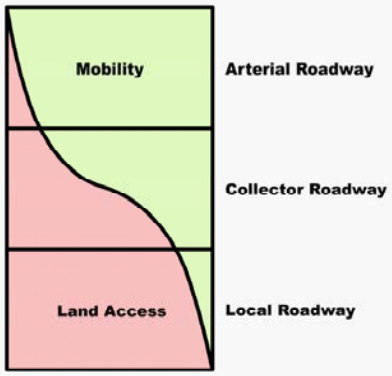


Figure 4-3: Roadway Functionality

The city of Hudson developed a Functional Classification System as part of the 1993 Comprehensive Plan. The system is similar to that used in many other cities in the area. The 1993 system should be updated in order to provide ongoing design and operational guidance for individual roads. This Functional Classification System is for planning purposes and focuses on assisting in the development of a transportation system to serve the area. Definitions for each of the classifications and guidance on design, operation, access, and traffic controls are provided later in this section.

The WisDOT also has a Functional Classification System for streets in the city of Hudson and in the surrounding unincorporated areas. This system is focused more on the existing use and

traffic volumes of the individual streets. While the system has been in place for many years and is updated by the WisDOT, there are segments within the WisDOT system that have undergone changes in character and the type of traffic served. The WisDOT system has associated uses such as for potential funding availability and non-funding functions. This system also has different criteria for adjacent urban and rural systems. As an example, an Urban Principal Arterial may become a Rural Collector at the edge of an urbanized area. In this Comprehensive Transportation Plan Element, this functional classification system will be referred to as the "WisDOT Functional Classification System". It will not be used for planning purposes in this document.

City of Hudson Functional Classification System – Planning Purposes

The Functional Classification System developed by the city has four primary categories: Principal Arterials, Minor Arterials, Collector Streets, and Local Streets. These classifications fit well with the framework provided in Figures 4-2 and 4-3. The classifications are similar to the 1993 system with Principal Arterials and Minor Arterials. However the 1993 system had categories for Major Collectors and Minor Collectors.

A complete description of each of the classifications follows with a table providing specific criteria including consideration for right of way width, roadway cross-sections, design controls, operating speeds, traffic controls, and comments on trails, sidewalks, intersections and parking.

All streets in the Hudson area were reviewed and then placed into these four Functional Classifications. Adjustments were made for continuity, limitations on both capacity and right of way potential, and system considerations. While existing access and operation were considerations, they did not govern nor require downgrading of a specific roadway. As an example, 2nd Street (STH 35) was classified as a Principal Arterial based on its function rather than operating speed or access control.

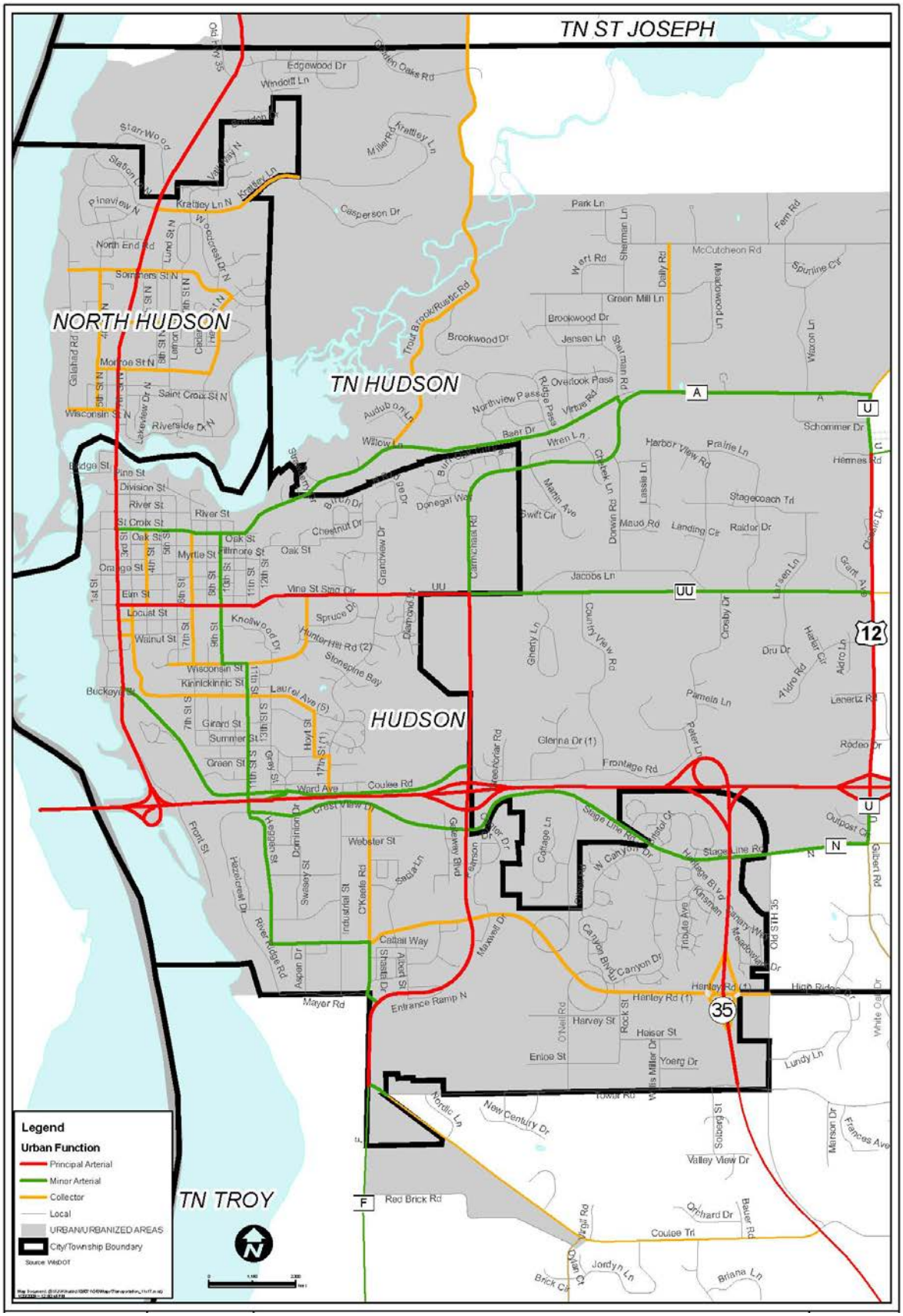


Figure 4-4: WisDOT Functional Classification System

Principal Arterials

Principal Arterials are the highest roadway classification and are intended to connect metropolitan centers with one another and connect major business concentrations in a region (Table 4-3). These roads emphasize a high degree of mobility and have longer trip lengths with higher traffic volumes. They connect Hudson to regions throughout Wisconsin and the Twin Cities metropolitan area. The Principal Arterials listed on the city of Hudson's 1993 functional classification map were:

- I-94
- STH 35 south of I-94
- STH 12, north of I-94
- STH 12, extended south from I-94

The following are suggested changes to the 1993 map:

- Add STH 35/ 2nd Street north from I-94
- Add Carmichael Road south from I-94
- Remove STH 12 extension south of I-94
- Remove STH 12 extension north of 90th Street (STH12 east)

Table 4-3: Principal Arterial	
Function:	Principal Arterials (PA) are intended to connect urban centers, major business centers, and regional destinations with one another, and provide regional and inter-city traffic movement. They are generally part of a state-wide or regional system. They have high capacity and design standards.
Access:	Access is restricted to major public streets; no direct property access is permitted. Spacing is a minimum of ¼ -mile with ½ -mile desirable. Where existing direct property access occurs, any redevelopment should include options to redirect access to other streets, provide frontage roads, provide cross property access, and/or consolidate access. Where existing street access is less than the minimum, options should be considered to close or restrict access.
Intersections:	Traffic on PAs should stop infrequently. Traffic signals should be limited to selected intersections and should be coordinated. All way stop control should not be permitted. Right and left turn lanes on PAs at all intersections are desirable, but are required at traffic signal controlled intersections.
Design Controls:	50 mph design speed desired, 40 mph design speed minimum. Existing developed areas may be exceptions.
Speed Limits:	40 to 50 mph. Existing developed areas may be less.
Cross Section:	4 lanes with median or two-way left turn lane 10-foot rural section shoulders or 6 foot urban section shoulders Lanes are 12-foot minimum with 2-foot reaction to curbs
Parking:	None, except in CBD.
Right-of-Way:	110 feet minimum, 125 feet desirable for an urban section. At intersections, an additional 10 feet by 500 feet area on the approach side to an intersection is required for a right turn lane. 80-foot minimum required for 2-lane section. For rural cross sections, a minimum width of 150 feet is required. Additional width may be needed for steeper slopes in areas of large "cut or fill sections".
Trails/ Sidewalks:	Both sides unless there is a designated parallel route
Examples	I-94 STH 35 (2nd Street) Carmichael Road south of I-94

Minor Arterials

Minor Arterials are intended to serve economic activity centers, intercommunity travel, and the Principal Arterial system (Table 4-4). Major business concentrations and other important traffic generators are commonly located on Minor Arterials where the emphasis is mobility with managed land access. Minor Arterials may provide regional traffic movement and are supplemental to Principal Arterials. In Hudson, the 1993 network of Minor Arterials includes:

- Heggen Street/Mayer Road
- Coulee Road (STH 35 to Carmichael Road)
- Crestview Drive/Stageline Road
- St Croix Street/old CTH A
- Carmichael Road/CTH F
- Coulee Trail/CTF FF
- Vine Street/CTH UU
- STH 35 north of I-94

The following are suggested changes to the 1993 map:

- Add Hanley Road
- Remove Mayer Road and Heggen Street south of Hanley Road
- Extend Stageline Road to CTH U
- Remove St Croix Ave/old CTH A
- Add new CTH A from Carmichael Road to CTH U, and then north
- Move Carmichael Road south of I-94 to Principal Arterial
- Move STH 35 north of I-94 to Principal Arterial

Table 4-4: Minor Arterial

Function:	Minor Arterials (MA) are intended to connect important locations (major shopping areas, employment areas, etc.) within the city with Principal Arterials (PAs), other urban areas, and other important locations. They supplement PAs and may provide regional traffic movement. They have high capacity and design standards.
Access:	While more access is permitted than for PAs, the emphasis is still on mobility. No direct property access is permitted except for concentrated access for employment, commercial, retail, or education centers. Spacing is a minimum of ¼-mile. Where existing direct property access occurs, any redevelopment should include options to redirect access to other streets, provide frontage roads, provide cross property access, and/or consolidate access. Where existing street access is less than the minimum, options should be considered to close or restrict access.
Intersections:	Traffic on MAs should stop infrequently. Traffic signals should be coordinated where feasible. Right and left turn lanes on MAs at PAs are desirable, as well as at other high turn volume intersections. All-way stop control should be discouraged.
Design Controls:	50 mph design speed desired, 40 mph design speed minimum. Existing developed areas may be exception.
Speed Limits:	35 to 50 mph. Existing developed areas may be less.
Cross Section:	4 lanes with median or two-way left turn lane 8-foot rural section shoulders and 6 foot urban section shoulders Lanes are 12-foot minimum 2-lane section permitted where justified by forecasted low traffic volumes, but intersection turn lanes required
Parking:	None, unless shoulder in urban area is 10 feet wide Limited to commercial areas
Right-of-Way:	110 feet. At intersection and concentrated access points, an additional 10 feet by 500 feet area on the approach side to an intersection is required for a right turn lane. 80-foot minimum required for 2-lane section. For rural cross sections, a minimum width of 150 feet is required. Additional width may be needed for steeper slopes in areas of large "cut or fill sections".
Trails/ Sidewalks:	Sidewalks both side minimum

Collectors

Collector roadways are designed to serve shorter trips that occur primarily within the Hudson area, and to collect and distribute traffic from neighborhoods and employment centers to the Arterial system (Table 4-5). The 1993 Major Collector system coincided closely with the proposed Collector Roadway system. That Major Collector system included the following streets:

- Hanley Road
- O'Keefe Road
- O'Neill Road
- Tower Road
- 3rd Street
- 7th Street north of Laurel Street
- 11th Street south of Wisconsin Ave
- 17th Street/Grandview Drive south of Vine Street
- Trout Brook Road
- Daily Road and McCutcheon Road
- Dorwin Road and Jacob's lane
- Country View Road
- Coulee Road/Frontage Road between Carmichael Road and STH 12
- Red Brick Road

The following are suggested changes to the 1993 map:

- Move Hanley Road to Minor Collector
- Convert all Major Collector Streets to Collector Streets
- Add St Croix Ave/old CTH A/Baer Drive

Table 4-5: Collector Streets	
Function:	Collector streets (CS) are intended to collect and distribute traffic from neighborhoods, commercial and employment areas, retail centers, and educational centers. They may connect these areas to one another or with the arterial system.
Access:	Connections to local streets are expected. Direct property access to commercial, retail, and industrial areas permitted, with 120 feet minimum desirable between driveways. It is desirable to prohibit or restrict direct access for residential properties.
Intersections:	Left turn lanes are desirable at Minor Arterial (MA) intersections, required at Principal Arterial (PA) intersections. Local street traffic should stop at CS intersections. All-way stops permitted at only other CS. Signals are usually only at MA or PA intersections.
Design Controls:	40 mph design speed desired, 30 mph design speed minimum
Speed Limits:	30 to 40 mph
Cross Section:	2 lanes with left turn lanes at MA and PA intersections or two-way left turn lane 4-foot rural section shoulders and 4-foot urban section shoulders minimum Lanes are 12-foot minimum 4 lanes or 5 lanes where traffic volumes are heavier
Parking:	Permitted if adequate width for 2 lanes remains (4 lanes where traffic volumes are heavier)
Right-of-Way:	80 feet for urban section (4 lanes or 5 lanes may require additional right-of-way of 110 feet). An additional 10 feet by 400 feet area on the approach side to an intersection is required for a right turn lane at MA and PA intersections. For rural cross sections, a minimum width of 120 feet is required (150 feet for 4 lanes or 5 lanes).
Trails/ Sidewalks:	Sidewalks one side minimum

Local Streets

The remaining streets in the transportation system are local streets. Local Streets serve local trips within the city, often in the same neighborhood. Local Streets connect with Collectors and Minor Arterials. As shown in Figure 4-3, land access is emphasized along local streets and mobility is decreased. Depending on the street system layout in specific developments some local streets will carry higher volumes of neighborhood traffic, but will not meet the criteria for a Collector street. The Minor Collectors in the 1993 system fit best into the local street classification.

Coordination with the WisDOT Functional Classification System

The Functional Classification System for planning is different from the WisDOT Functional Classification System. While efforts to modify the WisDOT system to correlate with the Planning system should be made, the WisDOT split between urban and rural and the jurisdiction of roads outside Hudson may make this difficult. Meeting with the WisDOT to discuss correlation of the systems is recommended. A section titled 'Suggested Modifications to the WisDOT Functional Classification Map for Hudson' at the end of this chapter contains some specific suggestions for changes, but the entire system should be discussed.

Context Sensitive Solutions is a common tool for addressing transportation needs. CSS is a theoretical and practical approach to transportation decision-making and design that takes into consideration the communities and lands which streets, roads, and highways pass through ("the context").

Transportation System Plan

Goals and Objectives

The city has generated a list of goals and objectives for the Hudson transportation system.

1. The transportation system should be planned, designed and constructed to accommodate future travel demand.
2. Work cooperatively with neighboring communities, St. Croix County, WisDOT and Minnesota agencies to plan the Hudson area transportation system.
3. Resolve the traffic congestion and circulation issues adjacent to and across the I-94 corridor.
4. Develop an overall transportation plan for residential growth that accommodates roadway needs across development boundaries.
5. As new development and redevelopment occur throughout various areas of the city, consider opportunities to combine driveways and modify intersections and street designs to improve traffic flow and safety in accordance with the functional classification of the primary roadways.
6. Require new development and redevelopment to provide an adequate system of local streets while limiting direct access to roadways consistent with functional classification in order to maintain safe and efficient operations on these roadways.
7. Use the Context Sensitive Solution process to address transportation concerns throughout the city. This is particularly important for the Downtown, historical areas and residential neighborhoods of Hudson.
8. Partner with the appropriate agencies to pursue transit alternatives for Hudson and St. Croix County.

State and Regional Plans

WisDOT has planned for the expansion of I-94 to provide an additional lane in the westbound direction from the STH 12 interchange to the St. Croix River bridge in 2014. The expansion will eventually extend east to STH 65. The addition of a third through lane westbound will not eliminate the existing auxiliary lanes between ramp terminals in the Hudson area. The project will impact the area between I-94 and Coulee Road; however, the width of the existing lanes on Coulee Road will not change. Resurfacing work is also scheduled to take place along I-94 beginning in 2010.

The DOT was planning to conduct a study in 2009 along I-94 at the STH 12 and STH 35 South interchanges. The study would have evaluated various alternatives to address the congestion eastbound between STH 35 and STH 12. Modeling of the corridor, including the Carmichael Road/I-94 interchange, should be completed to determine what modifications to the interchanges would improve operations. It is important to get the WisDOT to again plan to undertake the study as soon as possible, with City cooperation

WisDOT also recently published Connections 2030; the statewide long-range multimodal plan centered around seven themes. As part of the plan's Mobility and Transportation Choice theme, WisDOT committed to supporting the creation of new regional transit authorities.

The St. Croix County comprehensive planning process also began in the fall of 2008; the document and transportation plan are not complete at this time.

Local and Area Plans

Carmichael Road/I-94 Area

Background

I-94 is a major element in the Hudson Transportation System and is an origin or destination for many Hudson trips. There is a high demand for access to I-94. Currently, there are two full interchanges and an additional single westbound on-ramp. At the same time, I-94 is one of several barriers to traffic flow in Hudson. Access across I-94 is limited to two locations. Since the main access across I-94, which is Carmichael Road, coincides with one of the two interchanges, there is a considerable amount of traffic (22,000 ADT on Carmichael Road) and congestion in that area. Reducing the congestion, delays, and undesirable stopping in the Carmichael Road corridor is a major objective for the Hudson transportation system. Numerous suggestions have been made in the past and some have been implemented. However, the congestion remains and is a major source of irritation to area motorists and business owners.

Approach

To reduce the congestion in the Carmichael Road area, in both the short term and long term, a three step process is suggested.

1. The existing signal system consists of traffic signals on Carmichael Road at Coulee Road, the westbound I-94 ramps, the eastbound I-94 ramps, Crestview Drive, Center Drive and Hanley Road, and the intersection of Crestview Drive and Gateway Boulevard. These may be physically interconnected. There is a mixture of phasing, including split phasing on either the main line or cross streets at some intersections. Based on limited observations, the system does not appear to be operating at peak efficiency.

   The most economical way to improve traffic flow would be to optimize the traffic signal coordination. A simulation model should be utilized and a variety of concepts tested in the model. This may require some traffic data collection to determine not only turning movement volumes but travel patterns through the system. Having the "through movement" use Crestview Drive to the west and Carmichael Road to the north is a coordination concept to consider. Another option would be to have Center Drive and Hanley Road signals run as an independent signal system is another concept.

   A final intersection and phasing concept for the system should be determined and the optimized timing should be developed and installed on the signal controllers, assuming the necessary interconnection cabling is in-place and any desirable phasing changes can be made. The system should be observed during implementation and modified if necessary in the field, noting the results.

2. The simulation model should again be run, this time with a series of potential lane rearrangements or additions. There are several dual left turns and one triple left turn in place. Some turn lanes become designated lanes later in the interchange area. One concept to test is the closure of the median on Crestview Drive at Gateway Boulevard. This by itself may not be desirable, but if it is a key to an improved flow of traffic in the area, some mitigating design may make it possible. Another concept might include provision of three or four eastbound through lanes on Crestview Drive at Gateway Boulevard to provide continuity with the three left turn lanes and single through lane at Carmichael Road. Additional single or dual right and left turn lanes at intersections should be considered. This approach would provide options for short term improvements.

3. A third series of simulation model runs should be made testing larger concept impacts on traffic flow. An interesting concept is the provision of a direct connection from eastbound I-94 to Crestview Drive as a slip ramp from the exit ramp, keeping this heavy "two right turn" movement off Carmichael Road. Moving the Coulee Road intersection to the north side of the Target/Fresh Foods development is another concept. The eastbound entrance ramp to I-94 could be realigned to come from Stageline Road instead of Carmichael Road which provides opportunities to reduce turn conflicts on Carmichael Road. Developing a loop ramp which merges onto the east side of northbound Carmichael Road for the eastbound I-94 to northbound movement also reduces conflicts. These, and potentially several others, will require concept designs to complete the evaluation. The simulation model could be run first to determine the amount of benefit any of the concepts will provide to the Carmichael Road area.

Underscoring the importance of pursuing this phased approach is the study that WisDOT was planning to conduct in 2009 along I-94 at the STH 12 and STH 35 South interchanges. The study should include the Carmichael Road/I-94 interchange and consider, and possibly test future interchange design alternatives at this location. It will be critical that the City pursue the phased study of improvements for Carmichael Road prior to any WisDOT I-94/ STH 12 study such that they can provide WisDOT with an informed local perspective of operations of not only the Carmichael Road interchange but the Carmichael Road corridor and the surrounding roadway network.

11th Street/Heggen Street

Background

A second access across I-94 occurs with the 11th Street/Heggen Street Bridge. This corridor connects to Hanley Road on the south and to Vine Street via Wisconsin Street on the north. A major role of the Heggen Street Bridge over I-94 is the connection of Crestview Drive on the south and Coulee Road on the north, which provides, among other things, a connection between the commercial and industrial area on the hill and the downtown area.

Approach

The intersections on both sides of the bridge, at Coulee Road and at Crestview Drive, should be reviewed for the most efficient use of turn lanes and traffic controls. All-way stop control, traffic signals and coordination, free flow right turn lanes, and left and right turn lanes should be among the options considered.

The desirability of increasing traffic flow on the 11th Street/ Heggen Street corridor should be evaluated. Sending more traffic down Coulee Road into the already congested downtown area may not be desirable. Increasing traffic volumes on 11th Street, Wisconsin Street or Laurel Avenue, all residential in nature, may also have limited appeal in the city.

Additional Connections Across I-94

Background

Removal of a portion of traffic crossing I-94 at the Carmichael Road interchange will reduce congestion in the interchange. With numerous destinations for shopping and employment on the south side and many residential trip generators on the north side, there are a lot of local and regional trips not using I-94, but still in the Carmichael Road interchange area. Building a nearby, convenient, alternate route across I-94 would reroute some traffic and reduce congestion in the interchange area.

Three problems exist with this concept. One is limited information on the origin and destination of non-freeway traffic in the Carmichael Road interchange area. A second is the relatively flat terrain and amount of development in the area making location of the crossing (bridge or tunnel) difficult. The third is the lack of continuity of the street system in the area.

Approach

An origin destination study of the commercial areas north and south of I-94 would provide useful information on trips ends and routes of traffic in the area. Since any long term improvement, such as a bridge or tunnel, would be expensive and require prime right of way, the cost of an origin/destination study would be relatively inexpensive and be of great value in final decisions on the best concept, the best route and whether a concept is a "go or a no go". Preliminary information could be obtained from individual businesses in the form of zip code or customer data, or from license plate registration checks of vehicles in business parking lots. License plate matching is another option.

Preliminary concepts for an additional I-94 crossing west of Carmichael Road have very limited "touchdown points" where the bridge or tunnel would meet the existing elevation of the area without impacting other components of the transportation system or prime land uses. Several concept sketches should be prepared. These could include a connection to a new road behind Target and Fresh Foods which would align with Ward Avenue. The south touchdown point could lead to revisions in the Rest Area and the Gateway Boulevard/Crestview Drive intersection area. Another concept could be a "semi-split diamond" interchange design, which would incorporate a similar new I-94 crossing. This

might allow an expanded Park and Ride site. Several concept sketches of various options were generated in the development of the Transportation Plan and would be a good starting point for this approach.

Coulee Road and Ward Avenue

Background

Coulee Road served as a frontage road for Highway 12 and now as a frontage road for I-94. It also is one of the few routes between Downtown Hudson and the commercial area on the hill. Coulee Road intersects Carmichael Road just north of the I-94 interchange. Most of the commercial properties along Coulee Road have one or more driveways.

Ward Avenue is an east/west street a block north of Coulee Road between 13th Street and the Hudson Country Club east of 19th Street. Many of the businesses fronting Coulee Road have back access to Ward Avenue. A shopping center is located on the north side of Ward Avenue east of 17th Street. West of 17th Street, there is a mix of commercial, multi-family residential and single family residential.

Some of the concepts reviewed as part of the analysis for access to or across I-94 involved relocating the Coulee Road intersection with Carmichael Road to the north side of the Target Store. This could result in a relocated Coulee Road near the current east end of Ward Avenue.

Approach

Relocating the east end of Coulee Road, providing a new bridge across I-94, and/or some of the more extreme design concepts for the Carmichael Road interchange would result in a new roadway north of the Target store and perhaps other stores. This could lead to extension of Ward Avenue east to Carmichael Road and some connections to existing Coulee Road. This extension could be coupled with a new bridge over I-94 which would provide the distance and elevation for the north side connection.

Target, Fresh Foods, and a few other businesses have parking lots which would connect or an existing or extended Ward Avenue. Other businesses would need to revise their existing buildings and parking lots to be oriented to Ward Avenue. If any of the existing Coulee Road properties were to redevelop, vacation of a part of Coulee Road and orientation to Ward Avenue may make the change in orientation more viable.

The biggest problem facing extension of Ward Avenue to the east is the impact on the Hudson Country Club. The construction of the Target development already required relocation of a portion of the golf course and construction of a substantial retaining wall.

To determine the viability of any of the concepts involving relocation of portions of Coulee Road or extension of Ward Avenue, the potential to build a road between the Target and Fresh Foods stores and the Hudson County Club should be determined. This could involve further relocation of portions of the golf club, reconstruction of the retaining walls, and restructuring of parking lots. This study could include extension of Ward Avenue east, to the rear of the Fresh Foods Store as a second phase of the study.

Downtown Hudson

Background

The main street in downtown Hudson is 2nd Street, which is also a State Trunk Highway (STH) 35. STH 35 is the longest north/south State Highway in Wisconsin, over 350 miles long. In St. Croix and Pierce Counties, it meanders between cities and primarily serves area traffic. The volume south of Vine Street in 2006 was 12,600 vehicles per day. Based on Wisconsin DOT Traffic Volume Data, the volumes in the downtown have fluctuated, but there has not been any significant increase in traffic volumes in the past 20 years. This is contributed by less traffic on St. Croix Street and more traffic on Carmichael Road and First Street. Traffic counts on STH 35/2nd Street south of Vine Street for several past years are shown in Table 4-6. The Wisconsin DOT forecast volume for 2030 is 16,700 vehicles per day.

Figure 4-6 Hudson Traffic Volumes STH 35 south of Vine Street

YEAR	VOLUME
1976	9,890
1979	10,950
1982	11,100
1985	12,370
1988	13,810
1991	11,740
1994	14,300
1997	15,600
2000	15,000
2003	13,800
2006	12,600

2nd Street is an urban two-lane street with parking on both sides. Retail stores and restaurants generate high volumes of pedestrian traffic along and across 2nd Street. Vehicles maneuvering in and out of parking spaces create congestion and delays. Left turns are made from the through lane and can create long backups in traffic. Traffic signals at several intersections cause 2nd Street traffic to stop, especially when there is heavy pedestrian volume.

Approach

A number of concepts have been discussed as potential solutions to the "traffic problems" in downtown Hudson. The problems generally relate to delays and a feeling of congestion. However, the congestion is generally caused by the economic health of the downtown. Any attempts to "fix" the congestion should also consider the impacts to the character and economic vitality of the Downtown such as pedestrian movement and safety, parking, access to property, etc. This approach is more formally referred to as using Context Sensitive Solutions in Design (CSS). A 2006 document from the Institute for Transportation Engineers (ITE) outlines the CSS approach for situations similar to that along 2nd Street in Downtown Hudson. (Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities). The following process should provide that approach.

The "problems" should be defined in detail and both understood and quantified in a project purpose and need discussion. This may require some traffic and pedestrian counts at intersections; observations or counts of parking maneuvers and parking space usage; and public involvement.

1. Traffic Signal System: Signal system coordination should be optimized. Several concepts should be tried in a simulation model and settings for morning and afternoon rush periods, mid day, evening, and at different times during weekends should be provided. Pedestrian crossing times will be critical and should meet needs of pedestrian traffic while minimizing traffic stoppages on 2nd Street. Split Phasing of cross street traffic to reduce left turn conflicts may be beneficial. Converting the traffic signals at Vine Street and Walnut Street to actuated signals would provide more flexibility and efficiency for the coordinated system. "Green times" for the cross streets can be adjusted to accommodate the amount of traffic present, often providing more green time for 2nd Street.
2. Pedestrians: With parking and downtown destinations on either side of 2nd Street, pedestrians will be crossing 2nd Street. Their crossing is assisted and made safer with traffic signals at several locations. To maximize their safety and convenience, but minimize their impact on traffic flow, several steps can be undertaken. Walk and Don't Walk timing on the traffic signals should be optimized for pedestrian volumes and traffic signal coordination. The installation of actuated traffic signals at Vine Street and Walnut Street with pedestrian push buttons and pedestrian count down timers should be considered. With actuated traffic signals,

Past reports have suggested a one way pair of north/south streets. This is an inexpensive way of increasing overall capacity of a street system.

pedestrian crossing time is provided only when the push buttons are pushed, activating the "walk" phase. This would improve the efficiency of mainline traffic operations. Count down timers provide a safety benefit by giving pedestrians more information as they cross a street. The installation of actuated signals with push buttons would require the education of pedestrians who are currently in the habit of crossing the street without using them.

Marking of crosswalks, and stop lines at intersections increase respect between motorists and pedestrians. Proper signing, without overuse, is important such as the current use of in-lane pedestrian crossing signing. Getting pedestrians to cross only at marked crosswalks, through education and enforcement, will improve safety.

While these efforts are oriented primarily towards 2nd Street, they also apply to all the streets in the downtown area. Pedestrians should get the same attention on 1st Street as 2nd Street and a turn lane on Vine Street may also be quite beneficial.

3. Left Turn Lanes: The potential to add left turn lanes on 2nd Street should be explored, especially at intersections where major left turn volumes occur such as southbound at Vine Street. One left turn vehicle at an intersection can stop an entire platoon of vehicles in a coordinated signal system from proceeding. The trade-off may be removal of a few parking spaces at each left turn location. This trade-off may be dependent on finding replacement parking spaces.
4. One-Way Pair: Past reports have suggested a one way pair of north/south streets. This is an inexpensive way of increasing overall capacity of a street system. Traffic signal systems are more effective, intersection conflicts are reduced, left turn impacts are greatly reduced, and pedestrians have fewer conflicts.

   However a one way pair of streets will increase speeds and speed differential, create "lane jumping", create two busy streets, add mileage to some trips, and create some inconvenience and confusion for motorists. If 1st Street is used for southbound traffic, southbound motorists would need to make four 90 degree turns which may more than offset any time savings from less congestion. Each of these issues is undesirable from a Downtown planning perspective.

   There are also potential design concerns at the four intersections for the turning traffic. Several traffic signals along 1st and 2nd Streets would need to be installed or modified.

A review of potential improvements to Downtown traffic operations should include a list of the advantages and disadvantages of a one-way pair of streets on 2nd Street and 1st Street. This should be documented so there is no need to study it again.

5. Roundabouts: Roundabouts have also been suggested for some intersections in the downtown area. While roundabouts have a good record of reducing delays, crashes, crash severity and even pedestrian crashes, they need careful study before implementation. The City will support the use of roundabouts where needed and when properly designed.
6. Parking: Parking is critical to the economic success of a downtown. While removal of on-street parking could improve traffic flow, any removal should be carefully approached. If it is possible to replace a few parking spaces with other new nearby spaces, removal for improved traffic flow should be considered. To be pro-active, a search for additional parking should be continued. Opportunities should be explored to maximize on-street parking on the east/west cross streets such as the installation of more angle parking.
7. Sidewalks: Sidewalks are critical to safe and efficient pedestrian movement in the downtown area. Sidewalks should be reviewed to determine if they meet the needs of pedestrians in terms of condition, location (desired routes), clear area for movements, storage area at intersections, and coordination with traffic controls.

When properly designed, roundabouts have been found to have significantly lowered accident rates

STH 35 and STH 12 Connection

Background

STH 12 north from I-94 serves as access to the eastern portions of the Hudson area, and provides connections to County Roads UU and A. It also serves a growing commercial area near the interchange. STH 35 south from I-94 was recently reconstructed as an expressway to River Falls and is now being converted to an enhanced expressway or freeway to further limit access. There is no direct extension of STH 35 north at I-94 and STH 12 extends south from I-94, as County Road U, only a short distance to County Road N before becoming a residential street.

Volumes from I-94 to STH 35 (South/Exit 3) and STH 12 (North/Exit 4) are continually increasing as the area develops. Congestion on I-94 between the two interchanges is becoming a concern and one of the elements being studied by WisDOT. There is also concern over the queue of traffic on the eastbound exit ramp to STH 35/I-94 on STH 12.

A connection from STH 35 north to CTH UU (Vine Street) would provide an alternate access into the Hudson Area. It could also remove some of the weaving traffic on I-94 in both directions and queue of traffic on the eastbound exit ramp at the STH 12 interchange.

Approach

Providing a more direct connection between STH 35 to the south and STH 12 to the north would enable more traffic to efficiently travel on the east side of the Hudson Area. Several alternatives are available.

STH 35, as a local connection, could be extended north to Vine Street/CTH UU. This would enable the I-94 interchange to be converted to a standard diamond eliminating the existing loops which tend to create driver problems. However the conversion of the interchange would be inconsistent with the improvements in access control to STH 35. The extension would not improve the connection to STH 12 for the area north of Hudson, but only the area south of Vine Street. The extension would also impact a residential area.

Highway 12 could be widened and improved to the south to CTH N and CTH N also widened and improved to STH 35 to provide a higher capacity connection via the Hanley Road interchange. However, this route might not attract motorists away from the I-94 connection.

The interchange at STH 12 could be reconfigured to provide an eastbound loop on the east side of the interchange which would increase the weaving distance on I-94 and eliminate much of the queuing concerns for the eastbound exit ramp.

The Wisconsin DOT is planning to improve portions of I-94 in the Hudson Area. The City should be proactive in proposing concepts to improve overall traffic circulation options in the area.

South Industrial Park Area

Background

The South Industrial Park Area for this Plan is considered to be the area south of I-94 between Carmichael Road and Heggen Street. A number of past land use and transportation system decisions affected the overall layout of streets. The dog track resulted in the Carmichael Road design and interchange. Individual land use decisions resulted in Gateway Boulevard ending at Menards, close spacing of intersections along parts of Carmichael Road and Crestview Drive, and other transportation concerns. Other concerns resulted from changes to traffic patterns such as rest area access now being from Crestview Drive rather than directly from I-94 and the O'Keefe Road and Mayer Road intersection design.

The area is almost completely developed and is a mix of recent infill development and establishments that have been in place for over 50 years. While the City has been able to limit direct access to Arterial Streets and has made several improvements to the street system, the ever intensifying development makes it desirable to provide a plan and guidelines for further development.

Two previous sections in this Plan (Carmichael Road/I-94 and Additional I-94 Crossings) discuss Background and Approach to the more visible transportation concerns in the area. Some specific ideas for the South Industrial Park need to be part of the Plan.

Approach

There are 5 major routes to and from the South Industrial Park; Heggen Street across I-94, O'Keefe Road/Mayer Road to the south, and Crestview Drive, Hanley Road, and Center Drive as three routes to Carmichael Road and to the east. Heggen Street, O'Keefe Road, Crestview Drive and Hanley Road should comprise the Collector and Minor Arterial Streets in the area. Access control from properties to these streets should be consistent with these Functional Classifications.

Heggen Street, O'Keefe Road, Crestview Drive, and Hanley Road should carry more of the traffic and should have traffic control priorities at intersections. Existing intersections along these streets should be reviewed for controls and operation. Access from properties should also be reviewed. Access between private properties should be considered where traffic flows between the businesses that use the streets to travel between the driveways.

These streets can also serve as alternate routes for traffic now using the Carmichael Road interchange. An alternate to using Carmichael Road to the I-94 interchange for travel east would be using Hanley Road east to STH 35, then STH 35 north to eastbound

I-94. Heggen Street across I-94 is an alternate to Carmichael Road, and even to westbound I-94. Use of these streets as alternate routes should be encouraged by design, traffic controls, signing, and even maps from businesses.

Options for potential alternate access across I-94 should consider connections to these 4 streets in the South Industrial Park. As an example, a connection to O'Keefe Road instead of Industrial Street is preferred. Industrial Street has approximately 37 private access locations while O'Keefe Road has only 13, most in the first block south of Crestview Drive. O'Keefe Road also has better alignment with and connection to Carmichael Road/CTH F to the south, especially if the O'Keefe Road/Mayer Road intersection is modified to make O'Keefe Road the through street.

Any development or redevelopment in this area, especially involving a land use change, should include review of access and travel patterns as they affect these four streets. The review should consider opportunities to adjust driveways, intersections and street designs to improve traffic flow and safety.

Residential Growth Areas

Background

Early residential growth in Hudson occurred primarily near the downtown and Willow River. Subsequent growth occurred to the east with most north of I-94. Residential construction south of I-94 also occurred and consisted primarily of multi-family units. Recent growth has continued to the east, but with more occurring south of I-94.

Growth has also occurred in the Towns of Hudson and Troy. Most has been larger lot development and has taken advantage of the topography and environment resulting in numerous loops, cul-de-sacs, and meandering roads. This type development has limited transportation system options.

Approach

Several streets and roads will become Collector Streets or Minor Arterials in the Hudson Area through default; they are the only roads available to serve those functions. Some, such as CTH UU and CTH NN, are part of a St Croix County system and will fit the function. Others, such as Tower Road, Grandview Drive, Country View Road (Town of Hudson) and the North Frontage Road (Town of Hudson), will ultimately carry traffic volumes consistent with the higher Functional Class. However, the designs for the streets need to reflect the volumes and the Functional Classifications.

Some of the streets are currently outside the city of Hudson and some of these will probably remain outside the city. Coordination with the two Towns will be essential to incorporate traffic needs

from these areas into the Hudson Transportation System. The city should review ultimate anticipated area growth to plan future transportation needs. As the area north of I-94 between STH 12 and Carmichael Roads grows, will more traffic be funneled to the north Frontage Road intersection with Carmichael Road or should it be diverted to a different route?

The city should met with the two towns and discuss the future transportation needs and system. St Croix County could be included. This could result in a better understanding of traffic impacts of growth and hopefully an overall plan for growth and transportation.

The city also needs to develop an overall transportation system for residential growth. This should be flexible enough to provide development options, but specific enough to force compliance with provisions for traffic flow. Limiting direct property access to Minor Arterials such as CTH UU and Collectors such as Hanley Road will ultimately provide safety and efficiency for the future higher traffic volumes. Without this effort, the City, and the Towns, will face concerns similar to Grandview Drive which is a meandering street with direct residential property access, but carrying a higher volume of traffic.

The Functional Classification System recommended in this plan will provide a base system for the residential area growth and the streets to carry traffic from the growth.

The city also needs to anticipate street needs in subdivisions, even if there are no streets that are part of the Functional Classification System. A self contained development with no provisions for extending streets to future subdivisions may be acceptable in one area but create traffic problems for a different area.

Other Transportation Modes

Bicycle/Pedestrian

The bicycle and pedestrian facilities and needs for the city of Hudson are provided in the Park and Recreation section of the Comprehensive Plan. They should also be considered a part of the Transportation section.

While bicycles are often considered as a recreational transportation mode, especially in colder climates subject to snow, they are often used in lieu of other modes. They also often share transportation facilities with motor vehicles and impact operation and safety of the facility.

The safest location for bicycles is on a separate trail system with minimal vehicle conflicts. The number of "rail trails" and their heavy use is an indicator of their popularity. The Gateway Trail and Luce Line Trail in the Twin Cities have longer distance commuters making daily use of the trails. But there are many local trails that get regular use by commuters for shorter distances. Trails near schools, from elementary to college, get regular use by students and faculty.

Hudson should consider the potential trail system not only from a recreational view, but from an alternate transportation mode.

In many locations, bicycles and vehicles share a facility. Where the sharing results in a hazardous situation, such as near Carmichael Road and Crestview Drive, an alternate trail or route should be developed. At other locations where bicyclists are anticipated, provisions for bicycles should be incorporated, even if it is just an extra 4 or 5 feet of width. Care should be taken to have continuity and consistency in bicycle facilities.

Pedestrians can have a major impact on the safety and operation of the transportation system. Pedestrians crossing a major street can be at risk or can have an impact on traffic flow. Pedestrians need to be considered as a part of the system and not just in terms of provisions at a location. Periodically, a "safe walking routes to schools" program will be part of a safety or wellness campaign. The concept is always similar; inventory potential routes to schools, select the safest route, and enhance it. This is a concept and program that Hudson should embrace and continue. But it could be expanded beyond schools and be part of any known pedestrian route or desire line.

While both bicycle and pedestrian facilities are considered in more detail in the Park and Recreation section of this Comprehensive Plan, they both need to be incorporated into the transportation system for best results. The routes for bicycles and pedestrians need to be carefully coordinated with all other modes of

transportation. Riding a bike to school, walking to the store, or a recreational trip all involve and impact the transportation system.

Park and Pool/Ride

Currently, the city and the DOT have a park and pool/ride lot in the southwest corner of the intersection of Carmichael Road and Coulee Road. It is well used year round and the DOT is currently interested in expanding available spaces in the Carmichael Road interchange area. With the lack of many transit or rail options to the Twin Cities metro area and the high number of daily commuters, expansion of this relatively low cost, easy to use system is desirable. However, bringing additional traffic into the Carmichael Road interchange area for the purpose of switching vehicles or modes of transportation may not be desirable.

The increasing volumes of traffic on I-94 east of Carmichael Road and on the roads approaching I-94 may make additional locations desirable for park and ride lots. The use of alternate modes, including car pools, is based on economics, travel time, and convenience of access at both origin and destination. Congestion in the Carmichael Road interchange area obviously affects two of those four factors, detracting from drawing more motorists to join car pooling.

The city may need to look at alternate options for a future park and ride location which could become a transit hub as other modes such as rail, transit, etc come closer to reality. Depending on options that come from the multi-county study, locations near but off the I-94 corridor, such as Carmichael Road at Vine Street or along the railroad corridor could become locations.

The city should identify locations near each I-94 interchange for possible park and ride locations. The locations should be on commuter routes to intercept traffic. The locations should have easy access to the regional system during peak traffic hours, such as a signalized intersection. Direct and convenient access to the I-94 interchange ramps is needed. Adequate parking and some opportunities to add transit stops are desirable.

The DOT studies of the I-94 corridor offer a great opportunity to also search for sites for park and pool/ride lots. If the Highway 12 interchange is revised, such as to provide an eastbound to northbound loop, the southwest quadrant might offer a good lot location. A small additional property acquisition might provide a different interchange area location for a lot. The criteria for lot location and access spacing may make a Brakke Road location more desirable.

The city also needs to encourage car pooling and find a method for area residents to join car pools. The city might serve as a base for forming car pools, which is primarily a data base operation. The city could encourage car pooling through newsletters, websites, and brochures. Providing a parking area is only part of a car pooling system.

Transit

The city of Hudson is not currently served by a public transit system. Great Rivers Transit offers a private subscription-based bus service to the Twin Cities Metropolitan Area from the Park and Ride lot in Hudson. A new intercity bus service between the Twin Cities, Green Bay, and Milwaukee, makes a stop in Hudson.

Fixed route bus systems for communities such as Hudson would be difficult to implement and sustain. Most successful systems have large employment centers such as a central business district, major employer sites, and/or large attractions coupled with traffic and parking concerns. Ridership is drawn from concentrations of dwelling units or transportation mode change locations. Even with all elements of a successful system present, subsidies are often needed to offset operational costs.

Flexible route bus systems can overcome lack of concentrations of ridership, but always with subsidies. Even these systems need some opportunities for multiple ridership between stops in order to financially survive, usually in the form of household or employment concentration. With limited dwelling unit concentrations, large lot development in surrounding towns, and spread out employment, Hudson does not appear to be a good candidate for current concepts for bus transit systems.

That does not mean that Hudson should ignore potential bus transit. The recent increase in bus ridership with gas prices having increased to as much as $4.00 per gallon indicates some people will look for alternate transportation modes such as buses.

To be ready for possible changes towards bus transit, the transportation system components need to reflect on bus transit facilities. Park and pool/ride locations should include provisions for transfer to buses and between buses, meaning provision for multiple buses on site in the future. Direct I-94 bus access via either a bus only lane directly from the park and ride lot or metered ramps with bus bypass lanes should be considered or at least provided for in any interchange redesign. Potential bus stop locations should be considered in design of streets, intersections or areas. Buses stopped in a traffic lane are a safety hazard, but bus stops blocks away from a high ridership location are not often highly used.

Rail/Transit Options

Recently, Washington and Ramsey Counties in the Twin Cities metropolitan area have had discussions with Hudson and St. Croix County regarding participation in a study of transit alternatives for the I-94 Corridor. In recent years, many options for transit service in this area have been discussed but not formally studied. The options have included:

- The use of the existing Union Pacific freight railroad line adjacent to Lake Mallalieu for a commuter rail corridor to downtown St. Paul,
- Developing a railroad or Bus Rapid Transit (BRT) corridor along I-94, and
- Connecting to the Federally designated high speed rail corridor line between Chicago and the Twin Cities.

As a hub city in the fastest growing county in Wisconsin, the city of Hudson, in partnership with St. Croix County and WisDOT, should pursue opportunities to develop transit service for the area in the form of bus and rail. Transit should focus on serving the highest demand markets such as the Minnesota commuter and possibly city to city trips within the county/region. Transit use generally improves the overall capacity utilization of the transportation infrastructure. Additional benefits of developing transit in the area would be to provide mode choice to citizens, decrease emissions of greenhouse gases and promote a more sustainable community.

Rail

Currently, convenient intercity passenger rail service is limited to southeast Wisconsin. The Twin Cities has one light rail transit (LRT) line and one funded commuter rail line, both in the western side of the metro area. An LRT line between St. Paul and Minneapolis downtowns is approved and in progress.

The Midwest Regional Rail System has studied passenger rail service expansion. Two options to serve the Hudson Corridor were considered. One was to provide “Eau Claire plus La Crosse” service alternating train service between the two routes between Chicago and Minneapolis, one route through La Crosse and the other through Eau Claire. The other, “Eau Claire West”, would provide service between Eau Claire and Minneapolis with bus service from Eau Claire to Tomah, with the Chicago route going through La Crosse. Either option would require significant federal funding, rail infrastructure improvements and supporting transit systems. Most recent studies and funding for studies have been oriented to the La Crosse route.

Air

Hudson is located near three regional airports. Lake Elmo, Minnesota is less than 10 miles away and is one of the Metro Area reliever airports handling private flights. New Richmond Airport, 15 miles to the north, is the 5th largest regional airport in Wisconsin, averaging 122 flights per day. River Falls Airport, 15 miles to the south, is the smallest of the three. None has scheduled passenger air service.

The nearest scheduled air service is Minneapolis/St Paul International Airport approximately 25 miles southwest of Hudson. Taxi and limo service to the airport is available.

City Coordination

The city may find it desirable to proactively promote alternate modes of transportation. Options include coordinating local car pools for commuters, working with employers on Travel Demand Management or similar non-capital expenditure efforts. The Hudson Chamber or other government agencies could be cooperating partners in these types of ventures.

As outlined above, the city could become active in the Park and Pool/Ride program by serving as manager of a data base for potential car pools. Providing information on the benefits of pooling and how to form or find a car pool is an important element of a successful program.

Travel Demand Management is another method of controlling congestion and conserving energy and resources. The city can become a source of information or an active proponent of Travel Demand Management. Options include working with large generators of traffic, mostly employers, to control the volumes. A single large generator or several close spaced businesses can look at staggering work hours to eliminate a single surge of traffic from one area. It should be noted that this works against successful car pooling.

The city, perhaps with the Chamber as a partner, could work with businesses to seek ways to share services that could result in lower traffic volumes, such as shared deliveries and services. The two could also serve as a resource or proponent of other congestion and traffic reducing measures such as flexible hours, stay at home work, etc.

The city may choose to begin this effort by becoming a local, central, resource for existing information on the numerous opportunities to reduce traffic impacts. A number of resources could be referenced for staggered hours, flexible hours, car pooling, travel demand management, etc. The city website would be a rather inexpensive start.

Priorities and Improvement Process

The Transportation Element of the Comprehensive Plan provides many items to consider in implementing the recommendations and suggestions. The three steps in improving traffic flow on Carmichael Road, selecting locations for park and pool/ride lots, reviewing traffic forecasts, and modifying the Functional Classification System are a few of the more prominent items that need attention. To assist in the implementation, the following steps are suggested.

Implementation of recommendations in the Transportation Element need to be considered with implementation of other elements of the Comprehensive Plan. Overall implementation is outlined in a separate section in the Plan and incorporates the steps suggested in the following paragraphs, although in more general terms.

The Transportation Element should be reviewed and every suggestion, recommendation, or concept should be listed. This should include coordination activities such as the transit alternatives in the I-94 Corridor, studies such as downtown traffic improvement options, reviews such as traffic forecasts, concept development such as I-94 crossings, and capital improvements such as the downtown traffic signal coordination. The list should include enough information so the item intent is understood.

Once the list is complete, preliminary priorities need to be established. Each item should be considered independently in terms of its importance to completing the transportation system. A ranking of 1 to 5 or 1 to 10 could be used. The list and rankings will be adjusted in future steps, so it is not necessary to debate details. The list should then be arranged in priority order with the most important items first. Obvious adjustments could be made at this time.

Each item should then be reviewed to determine how to implement it. Any outside influence should be noted. If an item requires coordination with WisDOT or another jurisdiction, that should be noted. Any approvals that are needed should be considered along with the approval process and timetable. A study could be completed in a month, but the approval process could be strung out for several additional months.

Any costs for the implementation of an item should be understood and estimated. Capital improvement costs, the cost of any study, or the time costs for staff involvement should be included. Potential funding sources should be considered whether they be local or from state or federal agencies.

Each item should also be considered in terms of other items which need to be completed first. Some of the concepts suggested are dependent on analysis of other concepts. Potential completion of portions of Ward Avenue need to be studied before some of the I-94 bridge concepts can be developed. Traffic forecasts or origin and destination studies need to precede development of some of the bridge concepts.

The impact of private development should be considered. If development is proposed, can it be coordinated with an item to obtain cost savings or sharing? Conversely, the potential impacts of an item on a private development need to be considered. Some of the interchange concepts impact private property. The major considerations are the ultimate cost of an item and the impacts on scheduling.

If an item is dependent on funding or programming from another agency, the schedule for funding needs to be noted.

After all items have been reviewed and notes made for all of these influences, the priority list should be adjusted. Where necessary, a small flow diagram may be beneficial. Contingency notes should be added to any item dependent upon completion of a prior item. Longer range items which need to have planning studies implemented earlier should be split and prioritized accordingly. A new priority list should be developed and approved.

The process to reach this final priority list should be documented so that it will not be subject to constant questioning and changes. However, it should not be so rigid that changes cannot be made for good reason. Opportunities for funding, needs for interagency coordination, or similar adjustments to take advantage of opportunities should always be considered. Any change to this priority list needs to be documented.

Once the list is complete, implementation should commence. Several items should be moving forward at the same time, based on the priority list. But they should be started in priority order. The priority list should be reviewed annually or bi-annually to determine if any changes should be made. In this review, changes to a specific item should be the determining factor in where it fits in the priority list rather than trying to revise the entire list.

Without a pro-active implementation program, the efforts that went into development of the Transportation Element will be wasted and the Element is basically a historical document.

Suggested Modifications to the WisDOT Functional Classification Map for Hudson

Currently, Vine Street is classified as a Principal Arterial between STH 35 and Carmichael Road. Along this segment in the downtown Central Business District (CBD) area, Vine Street is a two-lane roadway with access to local streets at each block. There are all-way stops located at 3rd Street and 4th Street and a traffic signal at STH 35. There is on-street parking along the south side of the street along much of this segment. East of the downtown, Vine Street is two-lane roadway with turn lanes at many intersections. The speed limit along Vine Street is 25-mph and there is also a 15-mph school speed zone near the High School at Wisconsin Street.

Vine Street was previously designated STH 12 connecting Wisconsin to Minnesota via the old toll bridge across the St. Croix River. The route continued east along its current alignment to the present location of STH 12. Interstate 94 currently serves the function of old STH 12, providing a regional connection while Vine Street serves traffic traveling within the City and to neighboring communities such as the Town of Hudson. Because the function of the roadway has changed from serving regional trips to serving area trips, it is recommended to modify its functional classification through this segment to Minor Arterial.

Other roads which should be reviewed for changes include the following:

1. The combination of STH 12, CTH U, and CTH A from I-94 north towards New Richmond: Currently this is designated as a Principal Arterial, a Minor Arterial and a Collector as it proceeds north from I-94. It should be a reasonably consistent function over this segment.
2. Carmichael Road from I-94 to Vine Street: Currently a Principal Arterial, it may better fit the character of a Minor Arterial.
3. St Croix Street and Baer Drive (old CTH A) from STH 35 east to existing CTH A: Classified as a Minor Arterial, the roadway no longer serves that function and traffic on the street does not reflect the character or trip desires associated with a Minor Arterial and may better fit a Collector designation.
4. Collector Streets: Several segments of streets with this designation do not seem to fit the character of the designation. Some appear to be more of a Local Street such as 4th Street north of Vine Street. Hanley Road from O'Keefe Road to STH 35 seems to better meet the characteristics of a Minor Arterial than Collector, in particular with an

interchange at STH 35.

Because of the potential ramifications for funding, aids, etc., the system benefits should be carefully reviewed before any changes are made, especially deletion of a Collector Street. Roadways that are designated in the WisDOT functional classification system are eligible for federal funding. It is recommended that Vine Street, Carmichael Road and STH 12 corridor changes be pursued with WisDOT and that the remaining comments/questions be further studied.


Dibbo's
BAR · RESTAURANT
ENTERTAINMENT
15 MINUTE LOADING ZONE

ECONOMIC DEVELOPMENT

Introduction

This Chapter of the Comprehensive Plan summarizes the City of Hudson's existing economic activity and conditions. Economic development can be defined as a local perspective as efforts that seek to improve the economic well-being and the quality of life for a community by creating and/or retaining jobs and supporting or growing incomes and the tax base. The City of Hudson has based its economic development practices on the concept of creating a community that invites a diversity of businesses supported by the creation and maintenance of quality residential neighborhoods and school systems.

Labor Force Analysis

Educational Attainment

Refer to Table 1-6 in Chapter 1, Community Context. The 2000 Census indicated that 95 percent of the City's population over the age of 25 had achieved a high school diploma or higher and 37.7 percent had attained a bachelor's degree or higher.

Earnings and Income

Earnings and income come in many forms including wages, salaries, commissions, bonuses, tips, self-employment, interest, dividends, rental income, royalty income, income from estates and trusts, retirement income, public assistance, or disability. Table 1-12 (page 12) shows that the median household income for the City of Hudson household was $50,991 and the per capita income was $26,921 in 2000.

Over 84 percent (84.9) of the households in the City of Hudson had earnings, 19.1 percent had Social Security income, 1.3 percent had Supplemental Security income, 0.4 percent had public assistance, and 14.2 percent had retirement income. Please note that households may be receiving multiple forms of income; thus, the combined total of percentages exceeds 100 percent.

Labor Force and Unemployment

According to the 2000 Census, Hudson had 72.3 percent of persons, age 16 years and over, in the labor force. In 2000, only 1.1 percent of the population in the labor force was unemployed. The unemployment rate for St. Croix County in September 2008 was 3.7 percent. This rate was still lower than the state of Wisconsin (4.4 percent) and the nation (6.0 percent).

Type of Employment for City of Hudson Residents

Table 1-8 , Employment by Occupation and Table 1-9, Employment by Industry denotes the employment of Hudson residents in 2000. This is not the employment opportunities within the City, but rather how residents are employed whether their employment is in the City or another municipality. According to the 2000 Census, occupations in the field of management, professional and related occupations had the highest percentage (41.6 percent), followed by sales and office occupations at 26.7 percent. Other occupational categories listed in the 2000 Census included service (13.3 percent), production, transportation and material moving (11.4 percent), and construction, extraction, and maintenance (7.1 percent). The high percentage in management and sales occupations can be related to the City's high educational attainment.

Table 1-9 further breaks down the employment by classifications of City of Hudson residents. Manufacturing and education, health, and social services had the highest percentage of the employment classifications with 17.7 percent and 16.7 percent respectively.

In 2007, the Wisconsin Department of Workforce Development published the St. Croix County Workforce Profile. The profile noted that the high percentage of labor force is due to the high percentage of persons employed in professional occupations. In addition, the residents tend to work longer prior to retirement. However, by 2030, the St. Croix County population will have a high percentage, 28 percent, of the people 60 years or older. Labor force participation rates begin to drop sharply around the age of 55 due to early retirements, career ending illnesses and injuries.

Commuting Patterns

Table 1-10 (page 11) provides commuting patterns. The majority of people living in the City of Hudson travel less than 30 miles to work. However, the percentage of commuters traveling further from their residences increased during the period of 1990 to 2000. From a county-wide perspective, the Wisconsin Department of Workforce Development provided commuter information in 2003 denoting commuter destinations for St. Croix County workers. Of the 34,428 workers in St. Croix County, 48.7 percent commuted within St. Croix County and 43.6 commuted to the state of Minnesota, generally to the St. Paul/Minneapolis area. There were 2,731 commuters traveling to St. Croix County from Minnesota in 2003. The largest population of commuters coming to St. Croix County were from Pierce County, Polk County, and Dunn County as well as Washington County in Minnesota.

School District of Hudson - Hudson High School

City of Hudson - City Hall

Christian Community Home of Hudson.

Hudson Hospital and Clinics

Economic Base Characteristics

Largest Employers

The City of Hudson has been the government center for St. Croix County and economic hub for the Hudson community. The Wisconsin Department of Workforce Development (WisDWD) list the top employers located in the City of Hudson:

- School District of Hudson, elementary and secondary schools
- St. Croix County, governmental offices and services
- Nor Lake Inc., refrigeration and forced air heating
- Hudson Memorial Hospital Inc., general medical and surgical hospital
- YMCA of Greater Saint Paul, civic organization
- United Gear and Assembly Inc., machine shop
- County Market, supermarket and groceries
- Target, department store
- Walmart Mart
- City of Hudson, governmental offices and services
- Niro Inc., food product machinery manufacturing
- Hudson Physicians Inc., general medical and surgical services
- Wiseway Motor Freight Inc., general freight trucking, long distance
- Mills Fleet Farm, general merchandise store
- Menards, lumber and other building materials dealer
- Christian Community Home of Hudson, skilled nursing care facilities
- ARG Resources, limited services restaurants
- Firstsite Staffing Inc., temporary help services
- The Home Depot, lumber and other building materials dealer
- Family Fresh Foods, supermarket and groceries
- Valley Cartage Company Inc., general freight trucking, long and short distance
- Auto Stop, gasoline stations and convenience stores
- Phillips Plastics, engineering services
- The Resco Company, direct mail advertising and commercial printing
- McDuvie LLC, limited services restaurants

Local Commercial Development

The City of Hudson provides a wide variety of local commercial development including retail, service and professional office establishments located primarily in the downtown and "The Hill" commercial districts. The City should promote commercial development and redevelopment that will be compatible to the downtown area, including the Historic District and riverway as well as development and redevelopment in "The Hill" commercial district that will improve the appearance and quality of the area.

Economic Trends

The rapid growth experienced by the City of Hudson from 1985 to 2007 has substantially increased the assessed value of commercial and manufacturing properties. The commercial and residential values are reviewed in five-year increments from 1985 to 2005 and again in 2008 (Table 5-1).

It should be noted that commercial valuation may include properties in both the commercial and industrial zoning districts, whereas manufacturing valuation would primarily be located in industrial zoning districts.

In regards to job retention or creation, the City of Hudson is generally well positioned for expansion of existing businesses and creation of new businesses through the availability of existing building space and developable land. According to the St. Croix County Workforce Profile, only two types of employment sectors lost jobs in 2006: financial activities and construction, which reflect the slow down in the housing construction industry.

Table 5-1: Assessed Value of Commercial and Manufacturing Properties

Year	Total Assessed Value	Commercial/%	Manufacturing/%
1985	$135,942,400	$38,112,500/28.0%	$9,044,100/6.7%
1990	$266,953,600	$79,270,400/29.7%	$12,563,700/7.2%
1995	$340,843,600	$132,259,100/38.8%	$16,477,300/4.8%
2000	$620,564,300	$205,351,300/33.1%	$26,375,400/4.3%
2005	$1,310,770,990	$317,704,500/28.4%	$28,028,300/2.1%
2008	$1,516,928,500	$459,682,000/30.3%	$32,294,000/2.1%

Strengths and Weaknesses Analysis

Community strengths for attracting and/or retaining businesses and industries in Hudson:

- A diversified economy including professional office, service, retail and industrial developments.
- High quality of life with the natural beauty of the St. Croix River, the existence of an established and historic downtown commercial neighborhood, indoor and outdoor recreational opportunities, and quality medical care.
- Good education including private preschools, private grade schools, public kindergarten through high school, and nearby post high school opportunities at the University of Wisconsin – River Falls and at the Wisconsin Indianhead Technical College located in New Richmond.
- Close proximity to the Minneapolis/St. Paul metropolitan area.
- Excellent proximity to transportation systems with access to four airports within half an hour of Hudson and adjacent to the I-94 highway system.
- Good collaboration between governmental units and agencies associated with economic development.
- Well educated population.
- Relatively low crime rate.

Community Weaknesses

- An aging population resulting in a possible shortage of skilled labor in the future.
- Limited land for long-term development, particularly industrial property and business parks.
- Limited access capacity on, off and across I-94.

Identification of Existing Commercial Areas and Developable Land

Commercial Areas

Continued development of commercial and industrial properties can be addressed within the existing corporate boundaries of the City of Hudson. In general, the commercial opportunities are included in four areas:

- Downtown
- "The Hill," an area on the north and south sides of I-94
- STH 35 and Old Highway 35 south of I-94
- Vine Street and Carmichael Road (north of I-94)

The downtown commercial area was initially developed in the late 1800s and generally extends along the STH 35/Second Street corridor from First Street to Third Street, on Vine Street to Fourth Street and on Coulee Road east of Second Street. The district is a neighborhood comprised of eclectic buildings ranging from the late 1800s through the present. Although the amount of undeveloped land is limited, redevelopment opportunities exist for properties within the downtown in consideration of the historic district and nearby St. Croix River.

"The Hill" commercial area is the largest commercial area in the City of Hudson and includes the Coulee Road frontage businesses, Carmichael Road north of I-94, and an area on the south side of I-94 with development primarily along the Crest View Drive and Carmichael Road corridors including the St. Croix Meadows Greyhound track site, which is currently vacant. Development of this area began in the early 1960s when some businesses relocated from the downtown district. Again, redevelopment of parcels will be a significant issue for the City of Hudson.

The third commercial area is located along the corridors of STH 35 and Old Highway 35, south of I-94. This area is only partially developed and has approximately 83 acres of undeveloped commercial zoned property.

The Vine Street/Carmichael Road commercial area is located near the St. Croix County Government Center and has one undeveloped parcel.

Existing downtown commercial buildings.

"The Hill" commercial area

Industrial Areas

The industrial areas are generally contained in the combined Hudson Industrial Park and St. Croix Ventures Industrial Park located south of I-94 between Heggen Street and Carmichael Road and the St. Croix Business Park/St. Croix Business Park East located south of I-94 and between Carmichael Road and Old Highway 35. The Hudson Industrial Park and St. Croix Ventures Industrial Park are essentially built out, but may provide opportunities for redevelopment or expansion on existing sites. The St. Croix Business Park/St. Croix Business Park East was established in 1996 and 2008 respectively. The St. Croix Business Park has 46 acres of undeveloped platted lots and the St. Croix Business Park East has no development to date and contains 14.3 acres of lot area.

With the development of office, retail and manufacturing space in the late 1990s through the present, there exists a total of approximately 450,000 square feet of space available for purchase or lease based on a drive-by, internet, and telephone survey conducted on behalf of the Hudson Community Development Department in 2008. The amount of available space is a dynamic quantity that may change from week to week.

Sufficient property for commercial and industrial development is available in the short-term. Long-term development will be more of a concern as the City has limited areas to expand with natural barriers of the St. Croix River to the west and Lake Mallalieu to the north. Redevelopment of existing commercial and industrial sites will provide additional opportunities for development and should be a key element in the City's economic development program.

Environmentally Contaminated Sites

No sites were listed on the Wisconsin Department of Natural Resources (WisDNR) index for environmentally contaminated sites that have an "open" status. Sites that may have some level of contamination due to past uses that existed on the sites may include the former railroad right-of-way west of First Street extending from Vine Street to St. Croix Street and a site owned by Xcel Energy located on the north side and at the west end of St. Croix Street. Dependent upon proposed future uses of these areas, the City may want to explore brownfield assessment funds through the WisDNR to determine what degree of contamination may exist and if clean up of the sites is necessary.

Economic Development Programs

This section identifies programs and agencies that exist on the local, regional, state and federal levels that may assist the City of Hudson in its economic development efforts.

City of Hudson

Revolving loan funds. The City of Hudson provides low interest loan funds for businesses located in the St. Croix Business Park. The funds may be borrowed at an interest rate of 4 percent for a period generally of 3 to 7 years. Typical use of the funds is for working capital, equipment or land purchase or building development. A similar program is available to businesses located in the industrial or commercial areas of the City through the regional business fund to be discussed later.

Tax Increment Financing. The City of Hudson was the first community in Wisconsin to establish a Tax Increment District (TID) made available through Wisconsin state statutes. Tax increment financing is essentially a financing tool that cities may use to promote the expansion of the tax base. When the TID is created, the aggregate amount of the equalized value of the district is established and this amount becomes known as the base value. The municipality captures or retains the tax revenue generated for the district above the base value. The City of Hudson has used the TID increments very conservatively paying for street and utility improvements that serve industrial parks, business parks or commercial areas where development may not have otherwise taken place or taken place at a much slower rate, if not for the TID. Tax increment financing remains a viable economic development tool for the City of Hudson particularly in light of redevelopment potential in the downtown commercial district and future expansion of industrial or business parks.

The City of Hudson has created four TIDs, with the last, TID#4, retired in 2008. The four districts have assisted the City in developing the Hudson Industrial Park, the St. Croix Ventures Industrial Park, the Carmichael Road interchange, and the St. Croix Business Park as well as trunk sanitary sewer, water and stormwater utilities and streets to these areas.

St. Croix Business Park Corporation. In 1995, the St. Croix Business Park Corporation was established to manage the development of and recruitment of businesses into the business park. Two objectives were established to create jobs and provide an expanded tax base of the tax jurisdictions including the City of Hudson, School District of Hudson, St. Croix County and the Wisconsin Indianhead Technical College.

Hudson Area Chamber of Commerce and Tourism Bureau. Created in 1953, the Hudson Area Chamber of Commerce and Tourism Bureau (HACC) is the united voice of nearly 600 businesses located in the Hudson and surrounding communities of the St. Croix River Valley area. The HACC provides networking and marketing opportunities, educational programming, leadership development and several committees targeted toward varied aspects of commerce.

St. Croix County

St. Croix County Economic Development Corporation. The St. Croix Economic Development Corporation (SCEDC) was formed in 1993 operating as a not-for-profit organization comprised of municipalities within St. Croix County and private sector members that strive to improve the business climate within the county. Their activities include business recruitment and fostering entrepreneurial start-ups, the provision of educational opportunities, the provision of a clearinghouse for statistical information and identification of timely and important legislative issues at the state and federal levels. The SCEDC also assists with the Regional Business Fund program. Additional information regarding the SCEDC may be reviewed at http://www.stcroixedc.com.

Regional

Xcel Energy. Although Xcel Energy may best be recognized as the provider of electrical and natural gas utility in the City of Hudson, Xcel Energy has provided assistance to communities to promote economic development. Xcel Energy is a partner in the St. Croix Business Park Corporation and provides interim financing to the corporation to assist in purchase of land and other start up cost. Information regarding Xcel Energy's programs may be reviewed at www.xcelenergy.com.

West Central Wisconsin Regional Planning Commission. The West Central Wisconsin Regional Planning Commission (WCWRPC) is comprised of St. Croix, Barron, Chippewa, Clark, Dunn, Eau Claire and Polk Counties. The WCWRPC provides planning and technical service assistance to local municipalities. Services include local economic strategies, industrial site analyses, economic and population profiles, community and industrial park profiles and economic development financing though the Regional Business Fund, Inc. The City of Hudson participates in the Regional Business Fund, Inc. (RBF, Inc.) which is a non-profit economic development corporation whose purpose is to promote business and economic development. The RBF, Inc. offers loan funds to businesses that expand within the region, diversify the economy, add new technology and create quality jobs and capital investment in the region. Loan programs through the RBF, Inc. include the Business Revolving Loan Fund, Downtown Facade Loan Program, Micro

Loan Program and the Technology Enterprise Fund. Additional information regarding the WCWRPC and RBF, Inc. programs may be reviewed at www.wcwrpc.org.

Momentum West. Momentum West is a regional economic development organization serving St. Croix, Barron, Clark, Chippewa, Dunn, Eau Claire, Pierce, Pepin, Polk and Rusk counties. It is the mission of Momentum West to develop partnerships and leverage the resources in West Central Wisconsin to market the region and grow the economy. In 2007, Momentum West (then known as Momentum Chippewa Valley) conducted the Technology, Talent and Target Industry Assessment for nine counties including St. Croix County. The report may be accessed through Momentum West's website. Information regarding Momentum West may be found at www.momentumwst.org.

Small Business Development Center. Located at the University of Wisconsin - River Falls, the Small Business Development Center (UWRF/SBDC) provides information, advising and training to Wisconsin entrepreneurs and small business owners and managers located in St. Croix, Polk and Pierce Counties. The webpage for the UWRF/SBDC is www.sbdc@uwrf.edu.

West Central Wisconsin Community Action Agency, Inc. The West Central Wisconsin Community Action Agency, Inc., also known as West CAP, was established in 1965 and has their main office in Glenwood City, Wisconsin. West CAP has a business development program that works with small businesses, new entrepreneurs and local communities to develop business opportunities and support local economic development. West CAP programs may be reviewed at www.westcap.org.

State of Wisconsin

Wisconsin Department of Commerce. The Wisconsin Department of Commerce (WisDOC) and the Division of Business Development have a broad range of financial assistance programs to help communities with economic development. The Division of Business Development utilizes a combination of technical and financial assistance programs to assist businesses at points of the continuum including: business planning, site selection, initial capitalization, permitting, employee training, research and development, and business expansion. More information in regard to WisDOC/ Division of Business Development may be found at www.commerce.state.wi.us/BD.

Forward Wisconsin. Forward Wisconsin is a unique public-private state marketing and business recruitment organization. One of the principal functions of Forward Wisconsin is the marketing outside of Wisconsin to attract new businesses, jobs and increased economic activity to the state. Other assistance includes business cost comparisons, financial information, and a variety of other business consulting services to prospective expanding businesses out of state. The Wisconsin Department of Commerce is responsible for existing businesses, retention, expansion, financial programs and international development. Forward Wisconsin programs may be reviewed at www.forwardwi.com.

Wisconsin Department of Transportation. The Wisconsin Department of Transportation (WisDOT) acknowledges that the economic vitality and ability to remain competitive with other states must depend on the efficient transport of goods and people to the nation and the world. WisDOT has a number of economic development programs that may assist local communities and businesses in their efforts to promote businesses and maintain and improve transportation systems. Contact www.dot.wisconsin.gov/business/econdev/index.htm for more information.

Wisconsin Department of Tourism. The Wisconsin Department of Tourism promotes the tourism opportunities within the state including the operation of the state visitor centers and the provision of advertising and grant programs. Additional information for the Wisconsin Department of Tourism may be obtained at www.travelwisconsin.com.

Wisconsin Department of Natural Resources. From a perspective of economic development, the Wisconsin Department of Natural Resources is primarily limited to remediation and redevelopment programs. The Wisconsin Department of Natural Resources (WisDNR) provides assistance to municipalities and private

entities to investigate, cleanup and redevelop contaminated properties. The WisDNR program consolidates the federal and state programs. Information regarding the Remediation and Redevelopment programs may be found at www.dnr.state.us/org/aw/cleanup/model.htm.

Wisconsin Department of Revenue. The Wisconsin Department of Revenue (WisDOR) provides assistance to communities in the provision of information and the implementation of the tax increment financing program. WisDOR also provides businesses with tax related information. WisDOR information is available at their website at www.revenue.wi.gov.

University of Wisconsin – River Falls. The University of Wisconsin – River Falls (UW-RF) is located in the City of River Falls. The university has four colleges including the College of Business and Economics established in 2001. The university's mission is to act in close collaboration with communities, institutions and private enterprises to create a dynamic economy, sustainable communities and environment, and an optimum quality of life. The university's web page is www.uwrf.edu.

Wisconsin Indianhead Technical College. Located in the City of New Richmond, the Wisconsin Indianhead Technical College (WITC) is northwest Wisconsin's leader in technical education. The WITC creates opportunities for career preparation and personal effectiveness. Learn more about WITC at www.witc.edu.

Goals and Policies

Goal

Maintain and continue development of a strong, diversified, and balanced economic base and create a favorable climate for economic development and ongoing business activities.

Policies

- Promote and encourage quality commercial and industrial development in the City.
- Participate in the state legislation process on economic development issues.
- Actively promote development and redevelopment within the community, including financial incentives, with particular emphasis on attracting and supporting businesses that provide head-of-household jobs.
- Maintain and promote the vitality of the downtown area, including continued maintenance of older buildings. Promote the historical character of downtown and tie the commercial district to the river front.
- Encourage unique and locally owned retail store in the City, particularly downtown.
- Provide the necessary transportation and utility infrastructure to support modern commercial and industrial needs.
- Encourage the continued commercial and industrial development and redevelopment south of Interstate 94 and recognize the development potential of the interstate corridor. Promote performance standards for these areas in order to provide for compatible and desirable development.
- Identify emerging businesses and technologies and support the development of businesses involved in these fields.
- Work to develop a relationship between the educational requirements of local employers and the education opportunities provided by local / regional institutions.
- Continue to cooperate and coordinate economic development efforts with local, county, regional and state economic development groups and agencies to promote the City of Hudson, Hudson community, St. Croix County and west central Wisconsin.

Conclusion

The City of Hudson, the greater Hudson community, and St. Croix County have been identified as one of the fastest growing areas in Wisconsin and the United States. With this growth and the positive economic climate of the Minneapolis/St. Paul metropolitan area, the City of Hudson has been provided opportunities to establish and continue economic development efforts. In 2006, the first signs of the housing industry downturn were indicated with a noticeable reduction in the number of housing units permitted and then followed in 2007 and 2008 with the general economic slow down.

The collaboration of local, regional and state economic development groups have assisted the City of Hudson in establishing new jobs and a growing tax base. Economic development is not contained to, nor should be viewed as that of one community, but encompasses the Hudson area including the Village of North Hudson, the towns of Hudson, Troy and St. Joseph, St. Croix County and the west central Wisconsin region and is influenced by the Minneapolis/St. Paul metropolitan economy. Efforts must be continued by the City of Hudson, in collaboration with the local, regional and state economic development groups, for the City of Hudson to remain a vibrant community and a desirable place to live and conduct business.


HUDSON
TANNING
KARATE

UTILITIES & PUBLIC FACILITIES

Stormwater Management Facilities

System Description

The existing stormwater management system is presented in Figure 5-1, and consists of a series of pipes, manholes, ponding areas, ditches, culverts, lift stations, and force mains that convey stormwater to designated areas in order to prevent flooding. The primary function of a storm drainage system is to minimize property damage and inconvenience due to periodic flooding of streets, basements and other low-lying areas.

Unlike the municipal water and wastewater systems, the stormwater management system discussed in this Plan serves only the City of Hudson. The Village of North Hudson owns and operates its own stormwater management system.

The City of Hudson's stormwater management facilities are generally in good to excellent condition. Most of the newer stormwater lines are constructed of reinforced concrete pipe, and the manholes are constructed of precast concrete. In the older parts of the City, some manholes may still be constructed of brick or block materials. These structures should be considered for reconstruction when the streets are next resurfaced.

Currently, there is one stormwater pumping station in the system, located at a ponding area near the intersection of CTH F and Coulee Trail. This pumping station operates only when water levels in the pond become high enough to require pumping. The water is pumped north to an existing ponding area located near the intersection of Hanley Road and O'Keefe Road.

The City's drainage is generally from east to west toward the St. Croix River and south to north toward Lake Mallalieu. The locations of these water bodies are on the west and north sides of the system, whereas most of the growth is occurring on the east and south sides of the system. Growth located in the newer parts of the system generates additional water runoff which must be conveyed through the older parts of the system to the downstream receiving waters. The older parts of the system were sized and constructed many years ago and now have a limited capacity. For this reason, it is important to control runoff from new development sites in accordance with the City's stormwater standards and ordinances so as not to overload the older downstream facilities.

Applicable Stormwater Studies

A Comprehensive Surface Water Management Plan was completed in 1992 which outlined the stormwater management guidelines for the City and provided recommendations for locations and sizes of future stormwater facilities. Since the 1992 Plan was completed, much of the growth in the system has been to the south and southeast, specifically in the area south of I-94 and west of STH 35. In 1999, an update to the 1992 Plan was completed to address this southeasterly area, entitled "Surface Water Management Plan Update for the Stageline Road District". Both the 1992 Plan and the 1999 Plan Update have been used as effective tools for the planning and construction of stormwater facilities in the City.

These plans identify the future stormwater facilities that are anticipated to be needed as development continues. In addition, detailed design information and standards are listed for the guidance of both the City and potential developers. Ponding areas are to be designed for 100-year storm events, while storm sewer pipes are to be designed for a minimum 5-year storm event. Other guidelines for construction of ponds, overflows, freeboard requirements, etc. are also listed.

Another study, "Lake Mallalieu Stormwater Assessment Final Report", was completed in 2008. This study provided direction to the City in reducing pollutant loads from the City's storm drainage system to Lake Mallalieu. Four different discharge locations along Lake Mallalieu were studied, and options were discussed for reducing the pollutant loads at these locations. Some of the options for this area include detention basin construction, stormwater infiltration features, installation of hydrodynamic separators, increased street sweeping, additional public education, and fertilizer control.

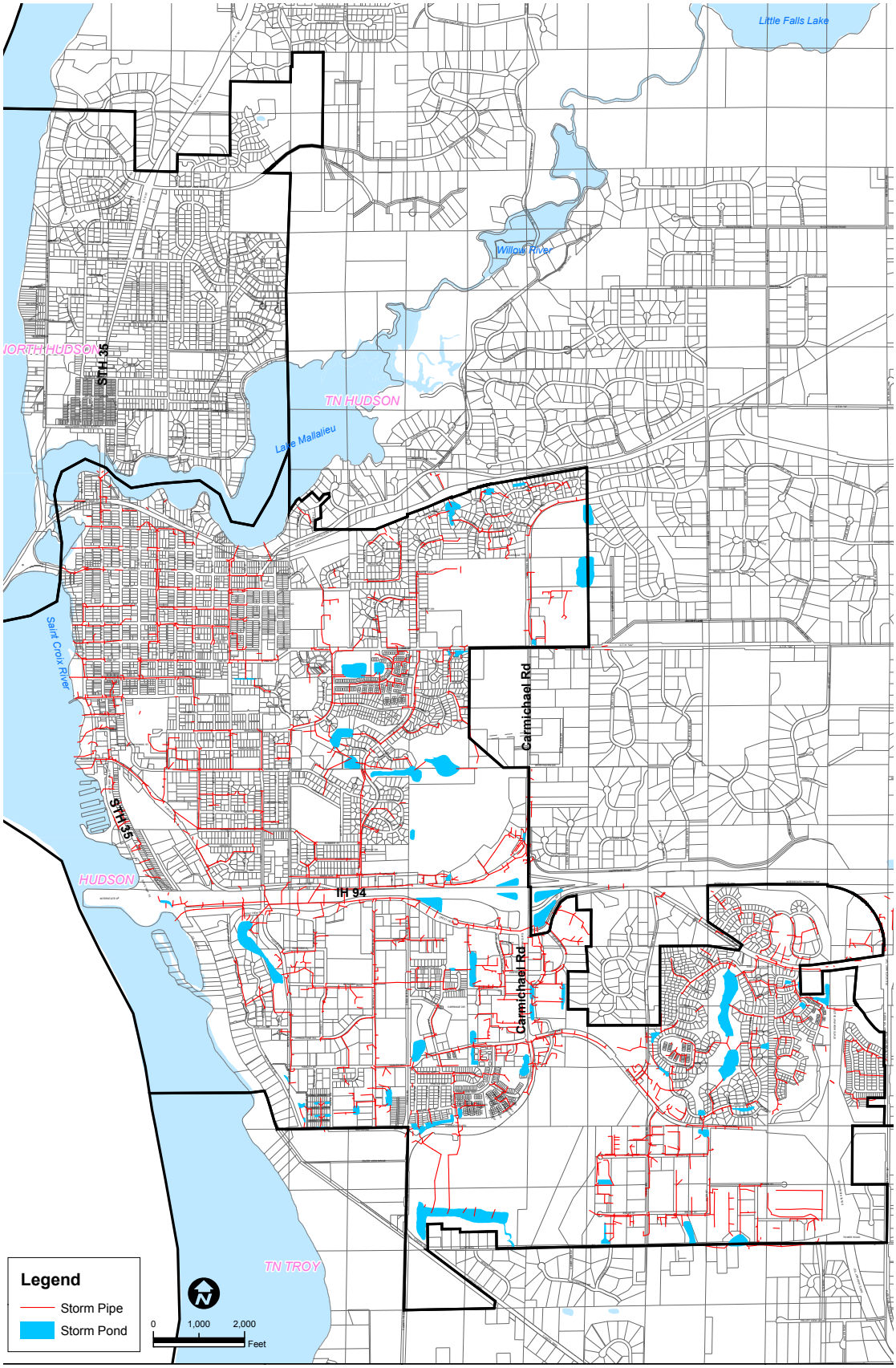


Figure 5-1: Storm Sewer System Map

Pending Stormwater Requirements

Once the 2010 Census data is published for the City of Hudson, the City's population will officially exceed 10,000. As a result, the City will be designated as an MS4 (Municipal Separate Storm Sewer System) community, and will need to obtain a WPDES (Wisconsin Pollutant Discharge Elimination System) permit from the Wisconsin DNR. This will require the City to implement additional stormwater management activities to meet the permit requirements.

One of the most significant requirements will be the need to reduce Total Suspended Solid (TSS) loads from existing developed areas discharging to waters of the state by 40 percent by March of 2013. Other items which the City must implement in order to comply with the WPDES permit include:

- Public involvement, participation, education and outreach.
- Construction and post-construction site stormwater management.
- Illicit discharge detection and elimination.
- Preparation of an updated stormwater facility map.
- Developing a schedule of compliance and documenting this compliance with annual reporting.

Stormwater Utility

The City has an impact fee ordinance, which is used to collect fees from new development for the purposes of paying the cost of the initial construction of the trunk storm sewer system. However, currently there is not a good method in place to generate funds to operate and maintain the existing system.

The City completed a study in March of 2008 to lay the ground work for the creation of a stormwater utility. Implementing a stormwater utility would create a dedicated funding source for storm drainage improvements and maintenance. The report documents the following potential benefits from a well-funded improvement and maintenance program:

- Flood control and drainage
- Enhanced water quality in area rivers and lakes
- Improved maintenance of existing infrastructure
- Erosion and sediment control
- An enhanced stormwater conveyance system

At this time, the stormwater utility has not been implemented. The City is considering the options and working through the details of how to best structure a stormwater utility. It is anticipated that

annual revenues from the utility could be used for items such as pond dredging, pond mowing, catch basin replacements, pipe replacements, depreciation, and water quality projects.

A draft ordinance has been prepared which could be used to adopt the stormwater utility. The ordinance covers methodology for computing fees, land use categories considered exempt from the fees, non-payment penalties, and the utility fee appeals process.

Operation and Maintenance

In the past, the City has done its best to operate and maintain the stormwater system as budgets allow. In 1997, an Erosion Control Ordinance was approved by the City. This has helped to reduce sedimentation and improve stormwater quality. However, even with such controls in place, significant maintenance of the system is still necessary to insure the successful operation of the storm drainage system.

The Public Works Department has historically performed pond maintenance work on an as-needed basis. One recent example was the Woodlands Pond dredging project near Chestnut Street. This project included dredging, re-grading, and structural repairs on the pond slopes. Another example was the dredging project at Pond No. 5 located near Heggen Street and Crestview Drive, which included construction of a new pre-treatment cell to improve water quality. Under the new stormwater regulations that are pending for the City, pond inspection and maintenance will need to be performed and documented on an established schedule.

As the City moves to the new stormwater regulations, operation and maintenance needs and expenses will increase significantly. Some ponds will need to be retrofitted to include not only an infiltration component but also a water quality component. Some of the dry pond areas may need to be converted to wet pond areas. Space, cost and man power to implement new best management practices will be a challenge in the future. The City owns very little property, and will need to take advantage of the property that is available. Maintenance activities such as sweeping will need to increase, which may put additional loads on manpower and on the available maintenance budget.

Stormwater Management System Goals

Suggested goals for the stormwater management system are listed below:

- Reconstruct any brick or block structures in the oldest parts of the system when the streets above the pipes are next resurfaced.
- Continue with a regular cleaning and inspection program of the piping system, structures and stormwater ponding areas.
- Implement the recommendations listed in the "Lake Mallalieu Stormwater Assessment Final Report" completed in 2008.
- Implement the Stormwater Utility to provide a dedicated funding source for stormwater drainage improvements and maintenance.
- Continue to follow the guidelines and recommendations listed in the 1992 Comprehensive Surface Water Management Plan and the 1999 update that was completed to address growth in the southeastern area, entitled "Surface Water Management Plan Update for the Stageline Road District".
- Plan and begin implementing measures necessary to meet the DNR's Municipal Stormwater Permit Program, which the City will be required to meet when the 2010 Census data becomes published.
- Land areas necessary for ponds and overflow routes should be described and adopted as part of a city official map pursuant to state statutes, so that these areas are protected and set aside prior to development.
- Continue to look for opportunities to implement low cost, effective stormwater practices, such as rain gardens, infiltration swales, fertilizer control, street sweeping, and public education.
- Continue to seek funding opportunities through the DNR's Runoff Management Grant program, and other similar grant programs.

Water Supply and Distribution

The existing water supply and distribution system is owned and operated by the Hudson Water Utility who's mission is to provide a product which meets or exceeds all state and federal guidelines. The system is presented in Figure 5-2, and consists of a series of mains, hydrants, valves, tanks, wells and treatment plants. Other notable facilities include the 7th Street Booster Pump System, the Meter Shop on 5th Street, and the storage building located near 8th Street and Wisconsin Street.

Records indicate that in 2008, the average daily water demand was about 2.4 million gallons per day (mgd) with a maximum daily demand of 4.9 mgd. In 2008, the Utility pumped and treated 906 million gallons of water. Water demands on the system have approximately doubled since the last comprehensive plan update was prepared in 1993. There are approximately 7,500 water meters in the system. The Utility has two portable generators and two stationary generators. Another generator is needed for Water Treatment Plant No. 4, and additional stationary generators will be added as new wells are constructed. The generators are necessary to provide an interrupted supply of clean water in the event of an emergency power outage.

All development within the current city corporate boundary is served with municipal water, with the exception of several small areas such as River Ridge Road and parts of Front Street. All facilities are owned by the Utility except for the service pipes located between the customer's building and the curb stop. These service pipes are privately owned by each individual property owner. However, the water meters located in each customer's building are owned by the Utility. The Village of North Hudson owns and is responsible for its mains and hydrants. The Utility owns the wells, treatment plants, and towers.

Distribution System

Hudson's water system serves both the City of Hudson and the Village of North Hudson, consisting of approximately 100 miles of pipe, ranging in size from 2 to 16 inches in diameter. Trunk mains are primarily 12 inches in diameter in the newer parts of the system and 10 inches in diameter in the older parts. Lateral water mains are primarily 8 inches in the newer areas, 6 inches in the older areas.

Overall, the water supply and distribution system is in good to excellent condition. However, the distribution system has some undersized water mains in the older parts of the City. The oldest parts of the system date back to 1890, and are now over 100 years old. Most of these undersized lines are 4 and 2 inches cast iron mains, with galvanized services. Many of the oldest mains have

already been replaced and the Utility continues to replace these mains concurrent with street reconstruction projects. Additional valves are also being added in the older parts of the system to better control the system during a shut down. Some of the older hydrants are obsolete and difficult to find parts for, and need to be upgraded. The undersized 2 inch mains are located primarily along Second Street through 12th Street in the northern part of the City. The 2 inch main located on the west side of 2nd Street between the railroad bridge and Lake Mallaleiu is scheduled to be upsized. Newer water mains are typically constructed of ductile iron materials with copper service pipes. Unaccounted for water loss in the system is estimated to be less than 10 percent, which is comparable to other systems and acceptable according to state guidelines.

According to the Hudson Water Department, no significant pressure or flow problems are currently occurring in the system, although the older parts of town with the smaller distribution pipes should be upgraded to larger sizes to improve available fire flows. Static pressures typically range from 43 to 100 pounds per square inch (psi). Static pressures between 35 and 100 psi are generally considered to be acceptable. If at some point, the Utility were to extend service to the Carriage Hills area located in the Town of Hudson east of Carmichael Road and north of Hanley Road, a booster pump would be required.

One area that could potentially be brought into the City in the future is the Carmichael Road corridor between I-94 and CTH UU. The area in question is currently in the Town of Hudson, and extends approximately one-quarter mile west to one-quarter mile east of Carmichael Road. A 12 inch diameter main is already in place down Carmichael Road and will be available to service this area.

The Utility will seek an opportunity to upgrade the current 4 inch main between the Hudson and Village of North Hudson systems to facilitate greater flow between the two systems in the event of an emergency. Each municipality has capacity to be “stand alone” as far as day to day operations, but in the event of emergency needs, better flow between the two systems is ideal and the goal is to upgrade the main. Analysis has determined that this upgrade should be 12 inches in diameter.

Wells

The Utility water supply is obtained from seven wells in Hudson and North Hudson which obtain ground water from the Jordan Sandstone Aquifer. No surface water is used in the system at the present time. Maximum capacity per day is currently 5.7 mgd/day, and firm capacity (system capacity with largest well out of service) is 4.3 mgd/day. Records for 2008 have indicated that demand exceeded supply in the theoretical sense (firm capacity exceeded), leading the Utility to conclude that greater capacity is needed as a buffer. This additional capacity buffer will be achieved by increasing GPM at the existing (older, lower producing) wells and when needed, an eighth well and treatment facility will be utilized in the southeast quadrant of the corporate limits. This new well has been drilled, is available, and will be utilized as development in the area demands in the future. A treatment facility will be added to the well when it comes on line.

The Hudson Water Utility plan is to continue to obtain water from groundwater resources. However, this does not preclude using surface water at some point in the future, if necessary. Some communities along the St. Croix River have utilized river water to supplement their fire fighting capabilities. The Town of Troy has a dry hydrant that can be used to pump water from the river for fire protection.

Storage

The water system consists of four pressure zones, including two high zones and two low zones. The two high zones have identical pressure range, as do the low zones. Accordingly, the system effectively functions like a two pressure zone system, with a single high zone and a single low zone. Each pressure zone has its own storage, supply and distribution facilities. The storage facilities are reservoirs used to store water for usage during emergency and peak demand conditions.

The existing storage facilities consist of one above ground reservoir and six elevated tanks. They have a combined storage capacity of 3.25 million gallons. There are two booster stations in the low pressure zone that pump into the high pressure zone. Five pressure sustaining valve stations are used to boost and maintain the required pressure and flow in the lower zone. The 7th Street Water Treatment Plant (No. 4) incorporates booster pumps that pump water from the 1.0 million gallon ground reservoir to the high zone, and also utilizes a pressure sustaining valve that can feed the low zone from the high zone. The current volume of water storage capacity is expected to meet the needs of the water system through 2030.

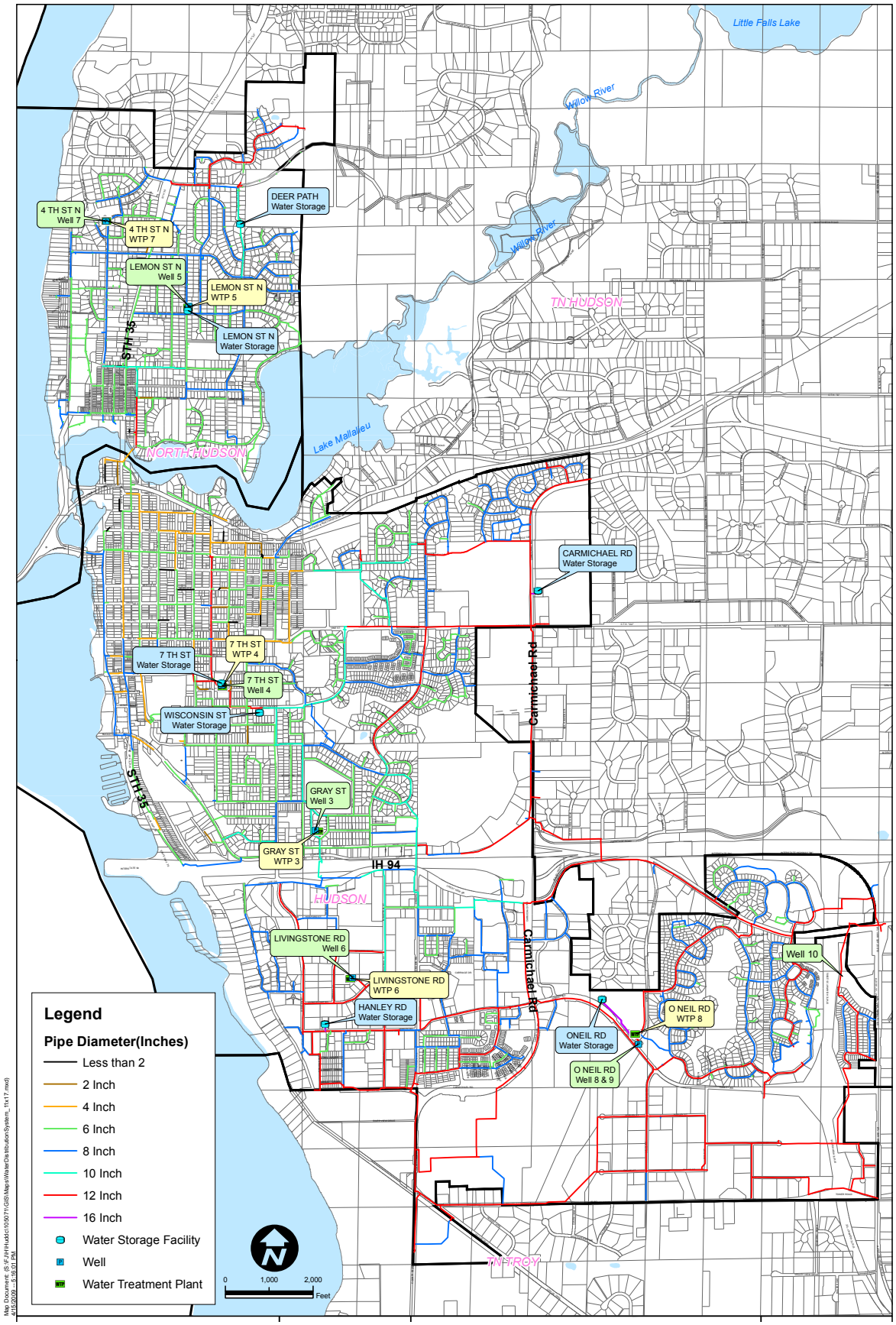


Figure 5-2: Water Distribution Map

Water Quality and Treatment

Because of the naturally occurring iron and manganese in the water from the Jordan Sandstone Aquifer, the Utility controls these substances by using filtration equipment installed at the wells. The Utility monitors water quality at the wells and water treatment plants, as well as throughout the distribution system to ensure a safe water supply. Current water treatment practices remove iron and manganese minerals, dissipate radon gas, and disinfect to prevent bacterial or viral contamination. An annual report is compiled by the Utility, summarizing all water quality results throughout the year.

The Town of Hudson has found some wells to have a Volatile Organic Compound (VOC) problem in the area from Lake Mallalieu to Highway 12. The DNR is requiring special casings on all new wells drilled in this area. With the poor soil characteristics in this area, it is possible that additional problems may develop in this area in the future. The Utility's existing wells are not located near this area, nor will any future wells be designed near it. The Utility has a wellhead protection ordinance in place to protect its wells from becoming contaminated.

Water System Goals and Policies

Suggested goals for the water supply and distribution system future are listed below:

- Provide sufficient, high quality water to meet the demand.
- Improve the system's capability for fire protection when the streets above the pipes are next resurfaced, by upgrading all mains to 8 inches or larger.
- Continue with a regular flushing, testing and inspection program of the system.
- Seek opportunities to increase the 4 inch water crossing under Lake Mallalieu between Hudson and North Hudson.
- Maintain competitive water rates for customers while at the same time continuing to build funds for future upgrades to the system.
- As the water system is improved, looping of the system should be provided wherever possible. Looping of water mains provides additional system reliability and greater hydraulic capacity.
- Expand the capacity of core facilities as needed to accommodate future growth.
- Consider implementation of a Geographic Information System (GIS) to better manage all city services.
- Continue a program of public education and promote water conservation. (See www.hudsonwaterutility.com).
- Review the current declining block water rate structure to determine if an alternative rate structure, such as a flat rate, could reduce peak water usage and therefore reduce the size of future core facilities.

Wastewater Collection and Treatment

Collection System

The existing wastewater collection system is presented in Figure 5-3, and consists of a series of pipes, manholes, lift stations and force mains that convey wastewater to the Wastewater Treatment Plant (WWTP). The service pipes from the customer's building to the lateral pipe located in the street are not owned by the City, but are owned and maintained by the property owner. Everything else downstream of these service pipes are owned and maintained by the City.

Hudson's collection system serves both the City of Hudson and the Village of North Hudson, and consists of pipes ranging in size from 8 to 21 inches in diameter. Manholes in the system provide access to the pipe network for cleaning and inspection. There are also 14 lift stations with force mains which pump wastewater from low points in the system up to higher elevations where the wastewater can then continue to flow by gravity toward the WWTP. All development within the current city corporate boundary is served by sanitary sewer, with the exception of about 20 homes located on Birkmose Drive and River Ridge Road which are still on septic systems.

The City of Hudson's collection system is generally in good condition. The older pipes within the system are constructed of clay, and the newer pipes are typically PVC (plastic). The older manholes are constructed of masonry materials (brick or block), and the newer manholes are constructed of precast concrete. The oldest parts of the collection system date back to 1890, and are now over 100 years old. These areas should be considered for reconstruction when the streets above the pipes are next resurfaced.

The City's 1993 Comprehensive Sanitary Sewer Plan (CSSP) stated that the majority of existing trunk lines in the City are adequately sized for ultimate design conditions, with the exception of the existing 15-inch trunk lines south and north of the WWTP. It is anticipated that as infill occurs within the City and development continues to occur to the east, north and south, these trunk lines located in the vicinity of the WWTP could become a capacity concern.

The location of the WWTP is on the west edge of the system, whereas much of the growth is occurring on the east and south edges. This results in a typical capacity concern which occurs in many wastewater collection systems. Growth located in the newer parts of the system generates additional wastewater which must be conveyed through the older parts of the system to the WWTP. Unfortunately, the older parts of the system were sized and constructed many years ago and now have a limited capacity.

Since the CSSP was completed in 1993, much of the growth in the system has been to the south and southeast, specifically in the area south of I-94 and west of STH 35. This southeasterly growth has consumed additional capacity in the trunk system in these areas, and the remaining capacity should be monitored as development continues in these areas.

There are only four sanitary sewer crossings of I-94 that provide sewer service to the south. One crossing is located at Front Street and provides service only to a few residences south of I-94. Two other crossings are located near 11th Street and these crossings provide service south to Tower Road and east to Carmichael Road. A final crossing is located near Glena Drive (Town of Hudson), and this crossing provides service south to Tower Road and east to STH 35. As growth continues to the east and south, these crossings could become bottlenecks.

Similarly, there is only one sewer crossing between North Hudson and Hudson under Lake Mallalieu, and this crossing must serve all of North Hudson. The crossing is an 8 inch force main serving a lift station located near Riverside Drive and Sally's Alley. If this crossing were to become inoperable, sewer service to North Hudson would be unavailable which would result in an emergency situation. It is suggested that discussions with the Village be held on developing emergency procedures to be put in place in the event of a failure of the crossing pipe. Long term discussions should also be held regarding the construction of a second crossing under Lake Mallalieu which could be used when the existing crossing must be taken out of service.

One area that could potentially be brought into the City in the future is the Carmichael Road corridor between I-94 and CTH UU. The area in question is currently in the Town of Hudson, and extends approximately one-quarter mile west to one-quarter mile east of Carmichael Road. When this area is brought into the City, a new trunk sewer is planned to be constructed from CTH UU south to an existing 21-inch trunk sewer. This will allow an existing lift station located north of CTH UU to be abandoned.

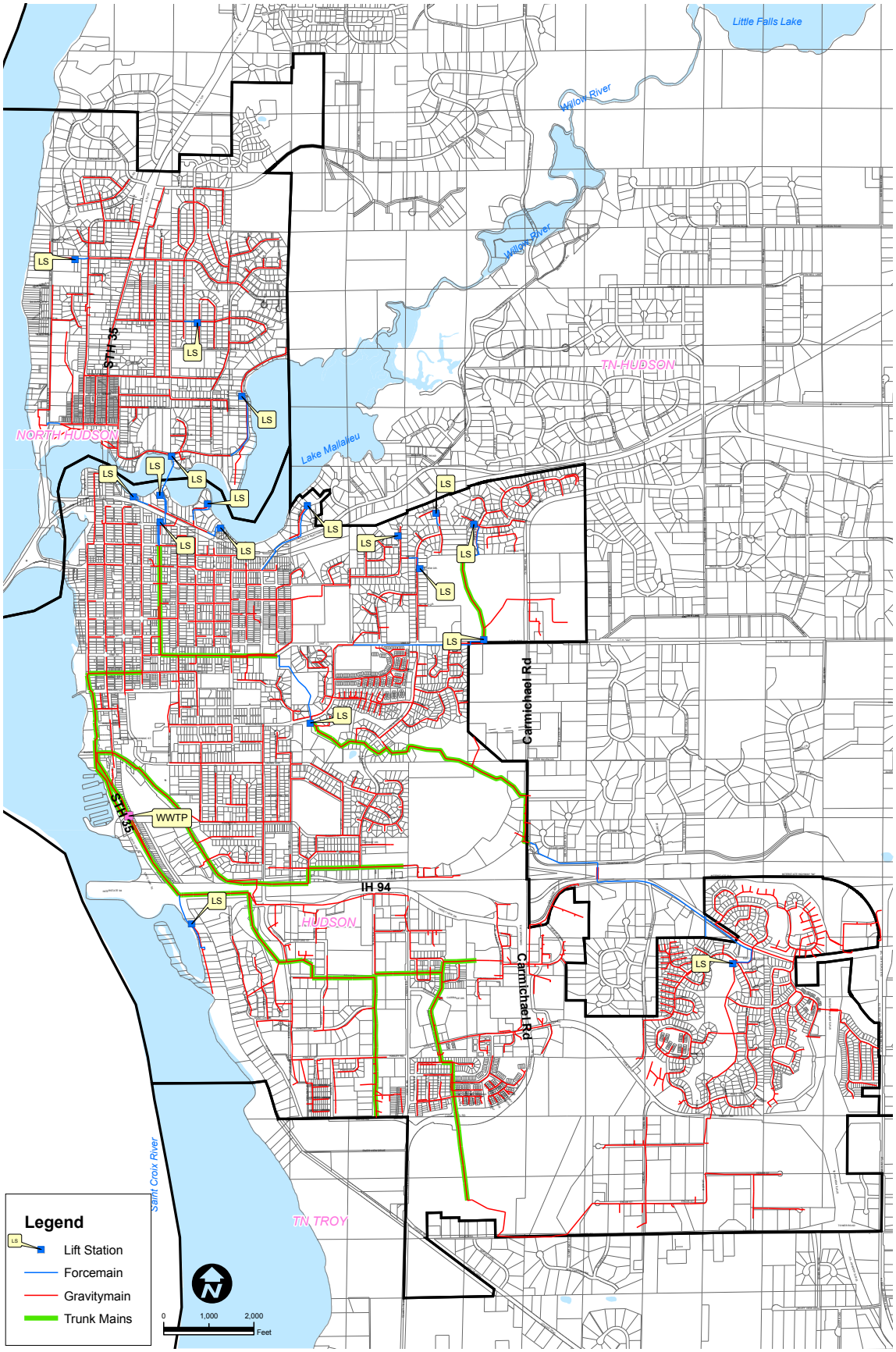


Figure 5-3: Sanitary Sewer System Map

Wastewater Treatment Plant

The current WWTP is located at 329 Front Street. It was constructed in 1959, with notable upgrades occurring in 1980, 1990 and 2000. The WWTP treats wastewater from the City of Hudson and the Village of North Hudson.

The wastewater treatment process consists of fine screening and grit removal, primary sedimentation, biological oxidation through the trickling filter process, final sedimentation, chlorination disinfection, and separate anaerobic digestion of sludge. The treated effluent is discharged to the Lake St. Croix portion of the St. Croix River through an outfall pipe. Screenings are bagged and hauled to a landfill and digested sludge is also hauled to a landfill.

The infrastructure of the plant is currently designed to treat 2.2 million gallons per day (mgd) average flow, with a peak flow capacity of 4.5 mgd. The current average flow at the plant is approximately 1.4 mgd. It is projected that the WWTP has the capacity today to serve all land currently within the corporate boundary at full development, in addition to a 0.5 mgd average flow allowance for future businesses along the Carmichael Road corridor between Interstate 94 and CTH UU.

The WWTP is currently in good to excellent condition, with a couple of minor exceptions. The anaerobic digester is too small to do digestion at capacity, and at some point the anaerobic digester may need to be abandoned in favor of an alternative system. Also the fine screens lack mechanized cleaning and must be periodically cleaned by hand, which can be impossible during peak events. The screens can become filled with grease, significantly reducing their capacity. Mechanized cleaning should be considered for the next plant upgrade. Some parts of the plant should be modernized with the latest technology to continue providing a high level of service at a low cost, to reduce energy consumption, and to maintain a clean, safe environment.

The WWTP has a Wisconsin Department of Natural Resources NPDES permit to discharge up to 2.6 mgd average flow. A report done by Bonestroo and Associates in 2007 discussed the options available and the estimated costs to upgrade the WWTP from an average design flow of 2.2 mgd to an average design flow of 2.6 mgd, which would match the permitted discharge limit. This report concluded that the plant's capacity could be increased to 2.6 mgd without obtaining additional land at the current site. The projected cost of the expansion was estimated to be $5,620,000. The key features of the expansion were anticipated to be fine screen modifications, construction of an additional anoxic/ anaerobic tank, installation of fixed film media in the aeration tanks, and installation of tube settlers in the clarifiers.

Financially, the sewer utility is in a good position to fund the construction of a WWTP expansion. The City has a Future Facilities Fund to accommodate future growth. The City currently has about $5.5 million in its Future Facilities Fund. After the current loan is paid off in 2018, it is projected that the City should have approximately $6.9 million in the account to be used for future expansion. The City also has approximately $1.5 million in the Wastewater Equipment Replacement Fund which can be used to fund equipment replacements. The sewer utility has always strived to provide high quality service in a cost effective way while protecting the public health and environment. As a result, Hudson's sewer rates are lower than many other communities in the area.

Land availability at the current WWTP site is very tight, and it appears that expansion of the plant beyond 2.6 mgd at the current site would require the acquisition of additional land. From a process standpoint, if additional land were available at the current site, it may be possible to nearly double the plant capacity. The challenge would be determining how to expand the plant incrementally. The 1993 CSSP mentioned the possibility of constructing a second WWTP near the intersection of Wisconsin Street and 13th Street. The topography of much of the undeveloped land east of the City is such that a treatment facility in this location could serve much of the land by gravity. Both options (i.e., expansion at the current site, and construction of a second plant) should be further explored to determine the best approach to meeting the future treatment needs.

In 1998, a report entitled "Hudson Area Urban Sewer Service Plan for 2020" was prepared and approved by the Wisconsin Department of Natural Resources. The report was prepared by the Hudson Area Urban Sewer Service Planning Committee and the West Central Wisconsin Regional Planning Commission. A 2020 Sewer Service Area (Service Area) is included in the 1998 report, and is generally described as extending south to Tower Road, east to STH 35, and north to the vicinity of Little Falls Lake. The Service Area contains approximately 9,525 acres. The report outlines growth and development trends, goals and policies, and other valuable information related to the wastewater collection and treatment systems.

Wastewater Collection and Treatment Goals and Policies

Suggested goals for the collection system and WWTP are listed below:

Collection System

- Reconstruct the oldest parts of the collection system when the streets above the pipes are next resurfaced.
- Monitor capacity of downtown trunk sewers to confirm adequate capacity exists prior to adding significant development to the system in upstream developing areas.
- Continue with a regular cleaning and inspection program of the collection system.
- Construct the Carmichael Road trunk sewer and abandon the lift station on CTH UU if and when the Carmichael Road corridor in annexed to the City.
- Develop emergency procedures in the event of a failure of the force main crossing pipe under Lake Mallalieu, and explore possible construction of a second crossing long term.
- Continue to implement the goals and policies identified in the 1998 report entitled "Hudson Area Urban Sewer Service Plan for 2020."

Wastewater Treatment Plant

- Continue to conduct operations in a cost effective manner without reducing the current high level of service.
- Modernize the WWTP by upgrading technology and security systems, and by implementing energy saving measures.
- Explore the possibility of securing additional land at the current WWTP site.
- Explore the options and costs for expanding the WWTP beyond 2.6 mgd.
- Investigate the acquisition of land for a potential second treatment plant near the intersection of Wisconsin Street and 13th Street.
- Maintain competitive sewer rates for customers while at the same time continuing to build funds for future upgrades to the wastewater collection and treatment systems.
- Consider implementing short term WWTP upgrades such as mechanized cleaning for the fine screens.

Miscellaneous Utilities

Solid Waste Disposal

The City contracts out solid waste/recyclable collection and hauling to private haulers who provide door-to-door and roll-off or dumpster service. The City's current contract is with Veolia Environmental Services out of Roberts, Wisconsin. Other private haulers offer similar services to other customers in the area. Trash is collected and hauled to a transfer station where it is loaded into semis and transported to a landfill.

The City owns a closed landfill located at 1150 Kratley Lane North, but no waste is accepted at this location. The DNR monitors the methane levels at the landfill site. The City does have several metal buildings at the landfill site, and utilizes the excess property for cold storage of items such as pipe materials, scrap metal, clean fill, etc.

Telecommunication and Internet Facilities

A number of companies are available to provide telecommunication and internet services to City residents and businesses. Primary providers include AT&T for telephone and Comcast for cable TV. Additional providers service surrounding areas. Sprint owns a fiber optic cable that runs along the railroad corridor, and the Hudson School District owns fiber optic facilities that interconnect their various buildings.

The City does not currently own or operate any communication facilities. However, the Water Utility leases space on their water towers to communications companies for the purposes of mounting antenna.

Access to wireless communication facilities is becoming more and more important. The City will have to determine whether or not they wish to engage in the development of communication facilities, or if the private sector should handle this issue. The demand and construction of these facilities are expected to increase and the City should actively participate in discussions and planning with local communication providers and St. Croix County to ensure that area residents have access to the latest technology; and any future siting of these facilities is done so in the best interest of the City and its residents.

Electric and Gas Facilities

The City provides no electric or gas services to its residents at this time. At one time, the Lake Mallalieu dam located at the confluence of Lake Mallalieu and the St. Croix River generated hydroelectric power. However, the hydroelectric unit was removed to save operating costs. There are several electric and gas companies that do provide service to the Hudson area. The primary provider within the City of Hudson is Xcel Energy for both electric and gas.

Dams

The City of Hudson owns and operates the Lake Mallalieu dam located at the confluence of Lake Mallalieu and the St. Croix River. This dam controls the elevation of Lake Mallalieu. The Wastewater Treatment Department operates and maintains the structure.

City Buildings

Buildings owned and maintained by the City of Hudson vary greatly in age and condition, as well as function. Sound and functional buildings with adequate space are a necessity to provide high quality services to the citizens of the community.

The purpose of this section is to summarize the buildings which are currently under ownership by the City, review the existing condition of these facilities, identify potential future needs, and list goals and policies that relate to city buildings.

Table 5-1: City Buildings

Administrative, Public Works, Library, Emergency Services

Building	Address	Existing Use	Year & Type of Original Construction	Last Renovated	Structural Condition	Deficiencies
City Hall	505 3rd St.	City Administrative Offices, Police Department	1927, masonry construction	An addition was constructed in 1991, and police department moved to the lower level	Good	Lacks building space and off street parking, needs new boiler
Municipal Building	911 4th St.	Municipal Court, Library, Cable TV, St. Croix County Courts, Non-Profit Groups, Storage	Built in 1965 as the St. Croix County Court House, masonry construction	Remodeled in 1995 when building was purchased from St. Croix County	Fair	Shortage of space, high heating costs
Public Works Garage East	1520 2nd St.	Maintenance Garage and Sand/Salt Storage	Masonry construction	N/A	Poor	Lacks space, no room for expansion, steep access drive, structural cracking, no sewer available, inadequate ventilation, needs new roof
Public Works Garage West (Former Bus Garage)	1425 2nd St.	Used for public works maintenance and storage, and for police impound lot	Insulated metal building with steel framing and partial asphalt floor	N/A	Poor	Poor structural condition with metal walls, location is not the best, needs additional garage doors
Public Safety Building	222 Walnut Street	EMS and Fire	1976, masonry construction	N/A	Good	Shortage of space
Buckeye Garage	SW Corner of First St and Buckeye St	Public Works and Parks Dept. Storage. Also used for sand storage and painting of picnic tables.	Built in 1887, stone and concrete masonry	Picnic shelter and restrooms have been added	Poor	Shortage of space, severe cracking in masonry walls, rotting wood in eaves, flooding in spring

Administrative, Public Works, Emergency Services and Library

The administrative, public works, emergency services and library buildings owned and maintained by the City of Hudson are shown in Figure 5-4. The current use and existing condition of each building is listed in Table 5-1. City buildings related to other departments such as Parks, Water and Wastewater are covered independently in other areas of this Plan.

Administrative

City Hall

The City's administrative offices are housed at City Hall, which is located at 505 Third Street. The building was originally constructed in 1927 of masonry construction, and underwent renovation in 1994 which included an addition to the building. City Hall houses the administrative functions of the City, and also houses the Police Department in the lower level.

City Hall has a new roof and is generally in good condition, but lacks space for future expansion. A new boiler is needed, as well as an update to the technology and security systems. Currently, there is only a single equipment room which periodically overheats due to the amount of equipment in the room.

The lack of space at City Hall may be reduced in the future if the Police Department relocates to a new space, which could free up the lower level for other uses.

Public Works

The primary Public Works facilities include the Public Works East Garage, the Public Works West Garage (former Bus Garage) and the Buckeye Garage.

Public Works East Garage

The Public Works East Garage is located at 1520 Second Street, which serves as a maintenance garage for City vehicles, and also provides storage for salt and sand. This facility is generally in poor condition. Existing deficiencies include the lack of space, structural cracking in the walls, inadequate ventilation, and the need for a new roof. Other site challenges include its location in a residential area, the steep access drive and not having sanitary sewer available at the site.

Public Works West Garage

This location is the former bus garage located at 1425 Second Street. The site is used for public works maintenance and storage, Fire Department storage, and also as a Police Department impound area. This building is an insulated metal structure with steel framing. It is generally in poor condition. The floor is partially asphalt and partially gravel. The building is not connected to City water, and has a well, but the water quality is poor. Two used motor oil furnaces were installed to heat the building, and several garage doors were recently installed.

Buckeye Garage

The Buckeye Garage is used for storage by both the Public Works Department and the Parks Department. The garage is in a convenient location at the southwest corner of Buckeye Street and 1st Street, near Lakefront Park. The structure was built in 1887 of stone and concrete masonry, and is generally in poor condition. A shortage of space has been noted, along with severe cracking of the walls, rotting wood in the eaves, and a periodic flooding problem in the spring when the river floods.

Emergency Services (Police, Fire, and EMS)

The primary buildings being used by the Police, Fire, and Emergency Medical Services (EMS) are the City Hall and the Public Safety Building.

Police Department (City Hall)

In 1991, the City Hall was remodeled, and the Police Department moved into the lower level. At that time, the space was barely adequate for 1991 conditions and had no room for expansion. Since that time, the police department has grown to 36 full time employees, and the space deficiencies have become severe. Technology systems are out of date, and the security and flow of the spaces have become a significant challenge. There are very few private interview areas, and evidence storage is lacking.

Public Safety Building

The Public Safety Building is located at 222 Walnut Street and was constructed in 1976 of masonry materials. The Public Safety Building is utilized by both the Fire Department and the EMS. The building is generally in good condition, but a significant shortage of space has been noted.

A Due Diligence Report of the Ad-Hoc Facilities Committee was prepared by the Police, Fire and Emergency Medical Services Departments in 2008. Many of the space needs relative to Emergency Services are documented in this report. In response to the recommendations made in the Due Diligence Report, an Emergency Services Space Study was completed in 2009 by an

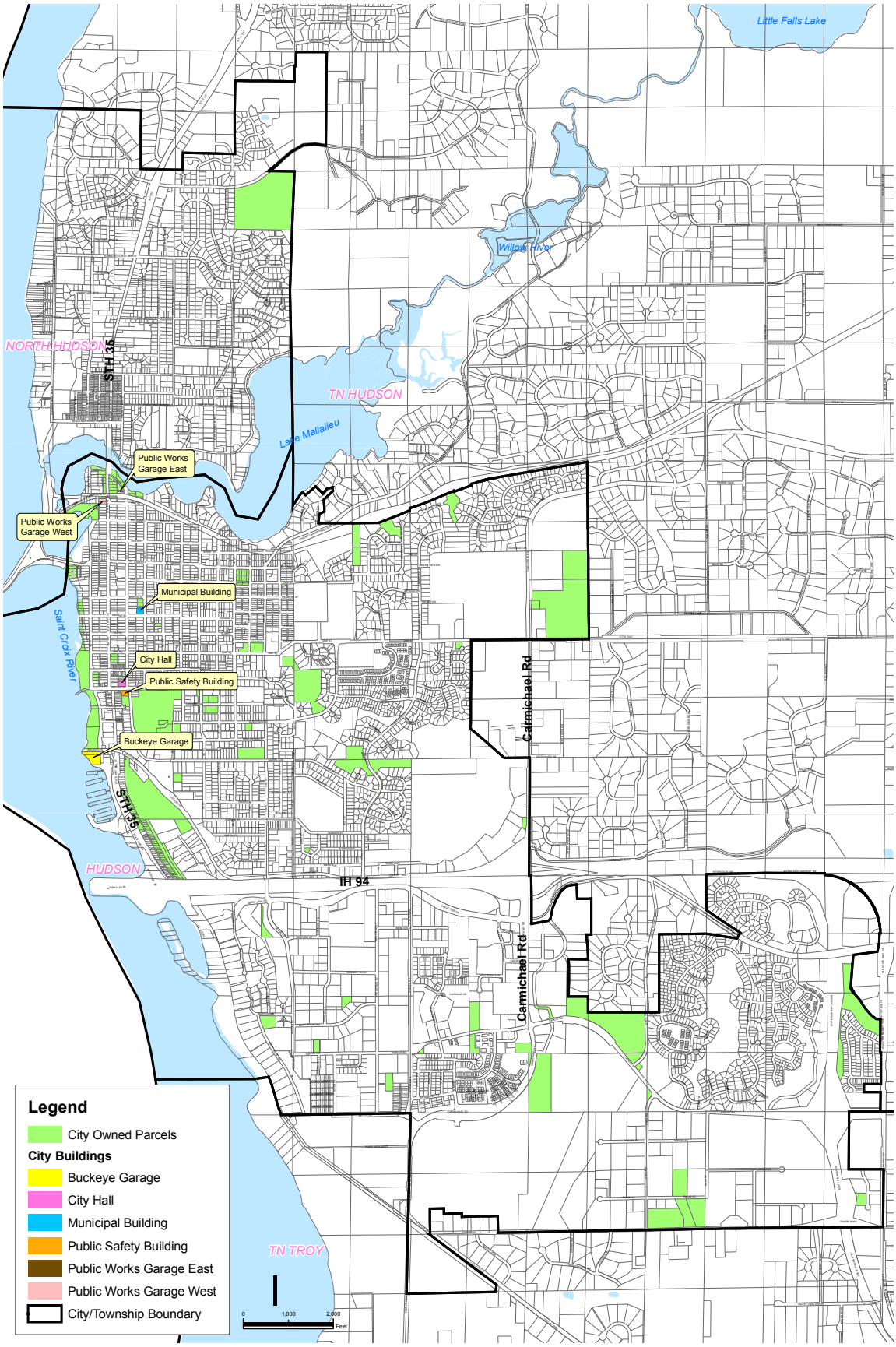


Figure 5-4: City Buildings Map

architect to identify the best way to address the significant space needs in the Police, Fire and EMS areas. The recommendation of the study were to secure additional space for Police, Fire, and EMS as soon as possible. Six different locations were identified as possible sites to explore. The study also found that savings would result if the Police, Fire, and EMS were to be co-located on a single site.

Library

Municipal Building

The Library is currently housed in the Municipal Building, located at 911 Fourth Street. The masonry building was built in 1965 as the St. Croix County Court House and was remodeled in 1995 when the building was purchased from St. Croix County. The building is in fair condition. Deficiencies in energy efficiency have been identified in that the heating and cooling systems are out of date and inefficient.

The library roughly occupies 1½ floors of the building. The building also houses the municipal court, the cable TV offices, and several non-profit groups. In addition, some space is utilized by the St. Croix County Courts.

In 2006, a consultant was hired to conduct an assessment of the existing library. The resulting report is entitled "Hudson Area Joint Library Assessment", prepared by Robert H. Rohlf Associates. This assessment identified a number of existing deficiencies and future needs relative to the library.

Goals

Goals for the City's administrative, public works, emergency services, and library buildings are listed below.

Administrative Offices

- Obtain adequate space to conduct effective operations in a cost effective manner without reducing the high level of service.
- Modernize City Hall by upgrading technology and security systems, and by implementing energy saving measures.

Public Works

- Locate future facilities in a more central, non-residential area that has good access to major roadway corridors.
- Modernize existing buildings by upgrading technology and security systems, and by implementing energy saving measures.
- Explore options for funding new improvements, and plan ahead so that funds are available when needed.
- Continue developing strategic partnerships with WisDot, St. Croix County, and other agencies for sharing equipment and facilities when needed.
- Obtain adequate space to conduct effective operations in a cost effective manner without reducing the high level of service.

Emergency Services

- Continue to maintain excellent police and safety protection throughout the City of Hudson.
- Continue to maintain excellent response time and high quality service.
- Continue to maintain highest level of pre-hospital care (EMS).
- Educate public on the roles and capabilities of emergency services.
- Implement recommendations of the Emergency Services Space Needs Study
- Emphasize training and explore cross training opportunities between emergency services departments.
- Obtain adequate space to conduct effective operations in a cost effective manner without reducing the high level of service.
- Locate future facilities in a more central area that has good access to major roadway corridors.
- Continue developing strategic partnerships with other

communities and agencies for sharing equipment and facilities when needed.

- Maintain current technologies with all equipment to provide best possible service.
- Maintain staffing levels commensurate with growing population of service area.
- Emphasize public education and prevention as lowest cost method of providing services.
- Maintain high quality recruiting and training program for volunteers (Fire).
- Maintain high quality/high integrity evidence storage space (Police).

Library

- Continue to work towards implementation of recommendations in Library Assessment Document.
- Have adequate and efficient space to maintain highest level of service to customers in a cost effective manner.
- Maintain updated and current inventory of resources.
- Continue to emphasize accessibility and convenience of users.
- Continue to maintain the latest technology systems for libraries.

INTERGOVERNMENTAL COOPERATION

INTERGOVERNMENTAL COOPERATION

Introduction

Intergovernmental cooperation is an arrangement by which municipalities, school districts and special districts may communicate issues and coordinate plans, policies, and programs to address and resolve issues of mutual interest. The level of complexity may depend on the specific issue(s) that is being considered. Examples of intergovernmental cooperation are communication, identification of mutual issues or concerns, sharing information or resources, entering into formal agreements, or the consolidation of services and / or jurisdictional authority.

Intergovernmental cooperation exists, on a local area-wide basis, between the City of Hudson, the Village of North Hudson, the towns of Hudson, Troy and St. Joseph, St. Croix County and the School District of Hudson. Efforts have existed for many years. In 1991, these entities established an Intergovernmental Council to periodically review issues that they have in common. Communications, through this council, have lead to a better understanding of issues and to efforts that have resulted in more efficient or effective methods of addressing concerns. Cooperative efforts also exist with regional, state and federal agencies.

Benefits that may be derived through intergovernmental cooperation include the ability to identify and act on common issues with consistency, predictability and mutual understanding; the savings of costs for services; the establishment of trust between jurisdictions; the establishment of a history of success in the implementation of policies or programs; and the provision of service to the citizens of the area.

Area Local Units of Government

City of Hudson

Located in western Wisconsin and dissected by I-94, the City has experienced a significant amount of growth since the late 1980s. The City of Hudson and St. Croix County are part of the Minneapolis / St. Paul metropolitan statistical area (MSA). The estimated population of Hudson in 2008 is 11,865.

County Government

The City of Hudson is located in St. Croix County in west central Wisconsin abutting the St. Croix River and the state of Minnesota. The Board of Supervisors consists of 31 supervisors each representing a geographic area. Five of the total 31 supervisory districts include part of the City of Hudson. In 2008, the citizens of St. Croix County approved a referendum to reduce the number of supervisors to 19. Redistricting to reduce the size of the county Board of Supervisors will become effective in 2010. Three segments of the county services that are well coordinated with the City of Hudson include emergency management, services to the elderly and economic development.

Village of North Hudson

The Village of North Hudson abuts the City of Hudson to the north and is separated from the City by Lake Mallalieu.

Towns of Hudson, Troy and St. Joseph

The Town of Hudson abuts the City of Hudson to the east. The Town of Hudson is third largest population of all the cities, villages and towns in St. Croix County. The Town of Troy is located to the south and east of the City of Hudson. Part of the Town of Troy is located in the School District of Hudson and part is located in the River Falls School District. The Town of St. Joseph is located to the north of the Village of North Hudson and also abuts the City of Stillwater, Minnesota located west of the St. Croix River.

Special Purpose Districts, Boards or Commissions

Water Utility Commission

The water utility commission was established as the policy and administrative board for the water utility serving the City of Hudson and Village of North Hudson.

Joint Fire Board

The Joint Fire Board is comprised of representatives from the City of Hudson, Village of North Hudson and the towns of Hudson and Troy. A City of Hudson Common Council representative is assigned to the joint fire board.

St. Croix Emergency Medical Services (EMS) Commission

This commission serves the geographical area of the City of Hudson, Village of North Hudson, the Town of Hudson parts of the towns of Troy and Warren.

Community Access Board

This board is comprised of representatives of the City of Hudson, Village of North Hudson and the School District of Hudson and is assigned the responsibility of administrating the local cable access franchise agreement and cable access network.

Hudson Area Joint Library Board

The Hudson Area Joint Library Board administers the public library facilities for the City of Hudson, Village of North Hudson, towns of Hudson and St. Joseph and part of the Town of Troy. The library is located at 911 Fourth Street within the City of Hudson municipal building.

School District of Hudson

The City of Hudson is located within the School District of Hudson. Four of the six elementary schools in the district, the middle school and the high school are located in the City of Hudson. One elementary school is located in North Hudson and one is located in the Town of St. Joseph. The City of Hudson has an agreement with the school district for the provision of a staff liaison (police) officer. The City also assigns a member of the Common Council as a liaison representative to the School Board.

Technical College District

The City of Hudson is located in the Wisconsin Indianhead Technical College (WITC) district. WITC facilities are located in New Richmond and River Falls.

Regional Agencies

Regional Planning Commission

Pursuant to Wisconsin Statute section 66.0309, there are eight regional planning commissions in Wisconsin. The City of Hudson is located in the West Central Wisconsin Regional Planning Commission (WCWRPC). WCWRPC is made up of the counties of St. Croix, Barron, Polk, Dunn, Chippewa, Eau Claire and Clark. WCWRPC provides services to member communities including land use, economic and transportation planning assistance; administration of the regional revolving loan fund; response to state and federal issues; grants writing; and agency coordination.

State Agencies

A number of state agencies serve the Hudson area including the Wisconsin Departments of Natural Resources, Transportation, Commerce, Revenue, Administration, and Agriculture, Trade and Consumer Protection.

Department of Natural Resources (DNR)

A local DNR service office is located in Baldwin about 20 miles east of the City of Hudson. Primary responsibilities include environmental quality, state parks and recreation. The St. Croix River is designated as an outstanding water resource with elevated levels of regulation due that status. Willow River State Park and Kinnickinnic State Park are located in close proximity to the City of Hudson.

Transportation (WisDOT)

I-94 and STH 35 are located within the corporate boundaries of the City of Hudson. A commuter lot and a state visitor center exist within Hudson on DOT properties. The district office is located in Eau Claire.

Commerce (DOC)

Building construction and safety regulations are administrated by the Safety and Building Division of DOC.

Revenue (DOR)

The Department of Revenue administers the assessment of real estate and oversees the tax increment financing districts (TIDs) throughout the state.

Administration (DOA)

The review of annexation petitions, platting, corporate boundary agreements, preparation of comprehensive land use plans is conducted by DOA.

Agriculture, Trade and Consumer Protection

The department works cooperatively with communities on licensing, consumer complaints and trade opportunities.

Nongovernmental Organizations

Hudson Area Chamber of Commerce and Tourism Bureau

The Chamber of Commerce has existed in Hudson since 1953 and the office is located at 502 Second Street in downtown Hudson. The Chamber works closely with the City of Hudson to promote businesses, respond to business or tourist inquiries and to host special events to promote the Hudson area communities.

St. Croix Business Park Corporation (SCBPC)

Organized in 1995, the membership is comprised of the City of Hudson, Xcel Energy and an at-large member. The SCBPC has developed and conducted the overall sale of land and general administration of the 250 acre business park. Assistance is provided to the SCBPC by the City of Hudson community development and finance departments.

St. Croix Economic Development Corporation (SCEDC)

This non-profit organization was established in 1993 to assist municipalities to improve the business climate within St. Croix County. SCEDC's membership is comprised of governmental units and private sector representatives. The City of Hudson is a member of the SCEDC.

Momentum West

A regional economic development organization was created in 2008 to serve the geographic area along the I-94 corridor.

Forward Wisconsin

Forward Wisconsin has existed as a private – public sponsored state-wide agency to promote economic development, particularly for marketing outside of Wisconsin to attract new businesses and jobs. Forward Wisconsin will be discontinued in 2010.

Existing Intergovernmental Cooperation

City of Hudson with local municipalities, districts and agencies.

The City of Hudson has several on-going efforts with the local municipalities and the school district in regard to intergovernmental cooperation:

- Intergovernmental Council – Village of North Hudson, towns of Hudson, Troy and St. Joseph, St. Croix County and the School District of Hudson
- Water and sanitary sewer service – Village of North Hudson
- Fire department and emergency medical services (EMS) – Village of North Hudson and the towns of Hudson and Troy, as well as other mutual-aid agreements with other fire and EMS departments in Wisconsin and Minnesota
- Library services – Village of North Hudson and the towns of Hudson, Troy and St. Joseph
- Extraterritorial zoning – Town of Hudson
- Extraterritorial plat approval – the towns of Hudson and Troy
- Sewer Service Area Planning – Village of North Hudson, the towns of Hudson, Troy and St. Joseph, St. Croix County and the Wisconsin Department of Natural Resources
- Recreational / sports fields – City of Hudson and School District of Hudson

Other on-going efforts on a regional or state-wide basis include:

- Economic development – St. Croix County Economic Development Corporation, Momentum West, West Central Wisconsin Regional Planning Commission and the Wisconsin Department of Commerce
- Transportation – St. Croix County Highway Department and the Wisconsin Department of Transportation
- St. Croix National Scenic Riverway (outstanding water resource) – Wisconsin and Minnesota Departments of Natural Resources, National Parks Service and the Army Corps of Engineers

Additional Opportunities for Intergovernmental Cooperation

The sharing of services and resources will become more significant to the municipalities and school district to help address the increasing cost of services and promote fiscal responsibility on behalf of the citizens, businesses and property owners within the Hudson area.

Alternative forms of transportation should be reviewed through cooperative efforts. The location of transportation terminals for commuting, light rail, high speed rail and bus services will become an important issue. Locations will need to be determined to preserve land near highway corridors for the transportation terminals. Also, the cost of implementation of these services will likely be too high for any one municipality to support on its own.

The creation of multi-jurisdictional sustainability policies is an opportunity for the City of Hudson, the Village of North Hudson, the towns of Hudson, Troy and St. Joseph, St. Croix County and the School District of Hudson to work cooperatively to enhance the environment, reduce the cost of energy consumption and create development policies which will incent the incorporation of sustainable elements into commercial and residential developments.

Existing or Potential Areas of Conflict

Generally, the intergovernmental cooperation between the City of Hudson, local municipalities, the school district, state agencies and other non-governmental organizations has been good. Potential areas of conflict may exist between the City of Hudson and the towns of Hudson and Troy as the City continues to expand through property owners choosing to petition the City for annexation and the provision of municipal water and sanitary sewer services. This issue may be managed through the creation of cooperative boundary agreements with the towns pursuant to Wisconsin States section 66.0225. The City of Hudson is not party to a cooperative boundary agreement, nor is any proposed at this time.

IMPLEMENTATION

This element serves as a "priority" list for implementing and realizing the plan. It prescribes those actions necessary to realize the visions, goals, and objectives highlighted in previous chapters of the plan. The plan addresses many important components critical to sustaining a healthy community while preserving the areas rural character, natural resources, and history. As change is inevitable, the plan may need to be amended to appropriately reflect land use changes.

Action Plan

The Hudson Comprehensive Plan is intended to help guide land use decisions within the City. The plan is not an attempt to predict the future, but rather an attempt to document the community's values and philosophies that citizens of Hudson share. The plan guides a variety of community issues including housing, transportation, land use, economic development, and intergovernmental cooperation.

The Hudson Plan Commission and City Council in reviewing all proposals pertaining to development should utilize the Comprehensive Plan. Proposals should be examined to determine whether they are consistent with community wishes and desires as expressed in the plan. As part of the review, a thorough review of the plan is necessary with particular attention given to the goals and objectives. Where the impact of a proposed development is minimal, the evaluation may simply be a determination of whether or not the plan provides relevant direction and whether the requested action is in conformance with the plan. Development proposals with significant potential impacts will require a more detailed analysis in order to determine consistency.

Plan Integration and Consistency

To ensure consistency across jurisdictional boundaries, the City of Hudson encourages early dialog between all adjoining and overlapping jurisdictions as they develop or revise their comprehensive plans and ordinances. Where inconsistencies are identified and a resolution cannot be reached, future actions can be developed to bring the parties together to address their concerns.

Plan Monitoring and Evaluation

As is stipulated in 1999 Wisconsin Act 9, a comprehensive plan must be updated at least once every 10 years. However, in order to ensure that the plan is an effective management tool, the Plan Commission will review the plan goals and objectives annually to track those activities that have been completed to realize its

accomplishments and identify areas where additional resources or actions are needed. Part of this effort, will also include addressing conflicts which may arise between the elements of the plan.

Comprehensive Plan Review

Purpose:

The City's Comprehensive Plan is the official growth and development policy document for the planning jurisdiction of the city of Hudson. The purpose of this planning document is to provide guidance related to land use, transportation, economic development and urban design. The key element of this plan is the introduction of action cards related to specific elements of the plan. These specific elements include action steps and general timelines needed to update each specific planning element.

In order to ensure that this Comprehensive Plan is continuously updated and reviewed, the City must review the document on an annual basis.

Action Steps:

- Annual Review (First Plan Commission meeting of each year). During the first official meeting of each year, the City Staff and Plan Commission will review action cards and timeframes of the Comprehensive Plan. During this meeting, the city will examine priorities, review action steps that have been achieved and determine new action steps for the calendar year. (2010+)

Amending the Comprehensive Plan

Purpose:

Comprehensive planning is a fluid and organic process. Amending the Comprehensive Plan is a policy decision that the city officials, with the assistance of staff, can make from time to time. However, an amendment to the Comprehensive Plan should not be taken for granted. Any amendment, no matter the size, should be viewed within the best interest of the community and within the frameworks of health, safety and general welfare. An amendment should also include specific findings of fact that support the need to amend the Plan.

Action Steps:

- All proposed amendments to the Comprehensive Plan will require the following steps:
    1. Public notification and public hearing about the request
    2. Findings of fact to support / deny the amendment
    3. Plan Commission approval / denial with findings of fact
    4. City Council review and approval /denial with findings of fact

Planning Applications and Review

Purpose:

The city of Hudson has seen a substantial amount of growth over the past several decades. As new growth and redevelopment occurs, it is critical that planning applications and review continues to be conducted in a fashion built upon the strict interpretation of the Zoning and Subdivision Ordinance. Planning applications also have to meet all necessary requirements for review by the Plan Commission and City Council.

Action Steps:

- All planning related applications including applications for variances, rezoning requests, site plans, platting, and amendments should be placed on the city's website and made available at the city's planning department. Each application should include the process for review, average timeline, information required by the applicant and estimated fees associated with each planning application. (2010-2011)

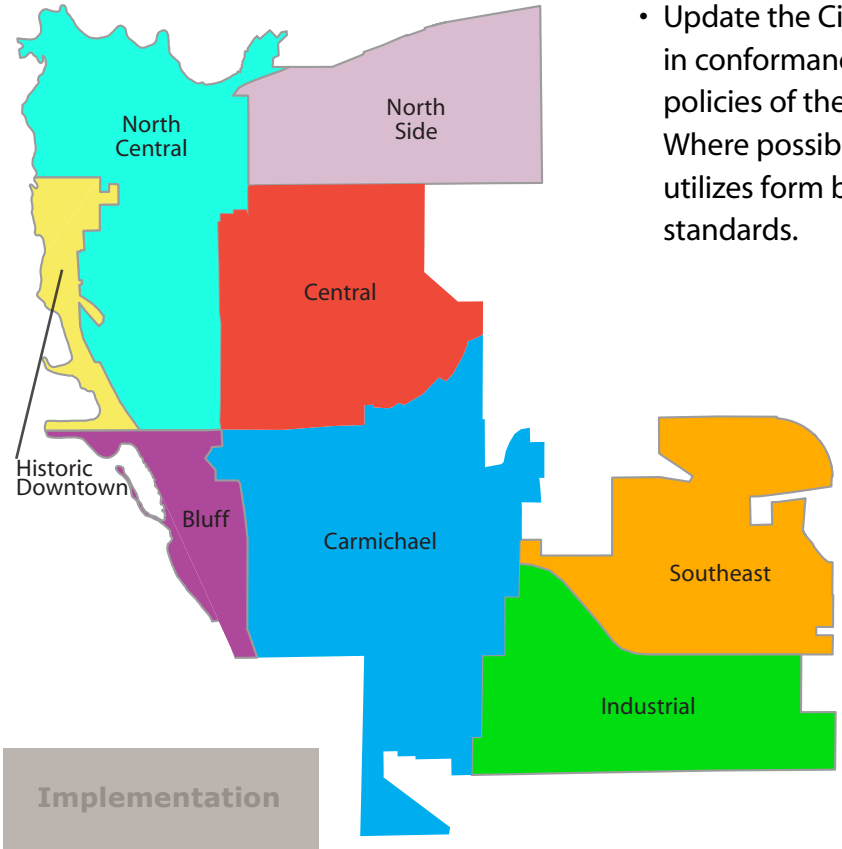
Planning Districts

Purpose:

A total of eight planning districts have been identified throughout the city. These areas were subdivided based upon their physical boundaries, geographic conditions, street patterns, land marks, or because they were a part of past planning studies. The planning districts identified as a part of the Hudson Comprehensive Plan include: Historic Downtown, North Central, Central, North Side, Bluff, Commercial, Southeast, and Industrial.

Action Steps:

- Plan Updates– The City's Plan Commission, as part of its annual review of the Comprehensive Plan, should review and amend districts as needed. Each of the planning districts serves as a guide for future land use within each area. (2010+)
- Utilize the established planning districts to develop strategic planning efforts for specific areas of the city.(2010+)
- Update the city's zoning ordinance to ensure consistency with the established planning districts. Specific review shall include: cul-de-sac lengths and standards within residential areas, trail and pedestrian shed standards, lighting and photometric standards, premature subdivision standards, and performance standards related to stormwater and urban design.



- Update the City's Zoning Ordinance to be in conformance with the overall goals and policies of the City's Comprehensive Plan. Where possible, develop an ordinance that utilizes form based approaches and design standards.

Extraterritorial Planning

Purpose:

Extraterritorial land use policies and action steps are critical to the long-term health and wellbeing of the region. Good planning in the form of land use controls, intergovernmental cooperation and transportation planning is critical to establishing a regional plan. The following action steps have been developed around the principles of partnership with the Town of Troy, the Town of Hudson and St. Croix County.

Action Steps:

- Create a voluntary Annexation Checklist (2010). The checklist will outline requirements, criteria, or factors to be considered before action on the request is taken.
- Meet with St. Croix County, Town of Troy and Town of Hudson to discuss extra-territorial planning authority in the urban growth area identified in the plan (2010).
- Develop premature subdivision standards for the urban growth area (2010).
- Incorporate ghost platting requirements as part of all primary plat applications within the urban growth area (2010).

Premature Subdivision Planning

Purpose:

Premature subdivision planning will assist surrounding towns and the city of Hudson in enforcing consistent and uniform subdivisions that will avoid leap-frog development patterns or patterns that cannot accommodate future extensions of urban services.

Action Steps:

- Conduct a joint planning committee meeting with surrounding towns to discuss the steps of premature subdivision standards and ghost platting requirements. Adopt a multi-jurisdictional agreement for ghost platting and premature subdivision standards within a one and one-half (1 ½) mile buffer of the city. (2010)
- Amend the city's zoning ordinance to adopt premature subdivision standards for areas outside of the city's boundaries. (2010-2011)
- Upload premature subdivision standards onto the city's website.

Corridor Planning

Purpose:

The purpose of corridor planning is to develop a set of key standards, policies and planning tools that specifically address transportation, land use, design and economic development issues at a micro-planning level. The overall purpose of developing a corridor plan is to establish a clear vision of the future for selected areas, coordinate improvement actions, provide guidance to land owners and developers within a specific area and respond to local transportation improvement.

Action Steps:

- Identify key corridor areas for further planning and review. (2010)
- Consider form based coding for key corridors within the city (2010-2011)
- Consider mixed use development at larger densities through density bonuses at key intersections. (2010-2011)
- Consider design guidelines for major corridors (2010-2011)

Parking

Purpose:

The demand for parking is an indicator of a thriving business or retail area within the city. It is also seen (for those searching for a parking space) as a hindrance. Identifying parking opportunities and better understanding parking demand (hours, locations) are key components to this action step.

Action Plans:

- Conduct a downtown parking forum to understand parking issues and opportunities within the downtown area. The purpose of the forum is to understand the concerns of business people and key stakeholders within the downtown area.
- Undertake a parking study for the downtown area to determine demand, traffic calming, wayfinding and transportation alternatives within the downtown area. (2010)
- Adopt parking standards for the downtown area. (2010)

Economic Development

Purpose:

The City of Hudson has a wide array of businesses, industries and retail opportunities. Ensuring a prosperous economic landscape will ensure that jobs, tax revenue and future growth will continue. The following action steps have been developed to ensure that partnerships within the business, economic and industrial community remain and prosper for decades to come.

Action Plans:

- Conduct an employment and mentorship forum within the City of Hudson and area chamber of commerce that promotes business and industry and also seeks to link those looking for work with area business leaders and key stakeholders. (2010)
- Promote programs like Experience Works which seek employment opportunities for older adults looking for work. (2010)
- Continue to develop partnerships with agencies like Momentum West and the Small Business Development Center which promote economic development and job growth. (on-going)

Housing

Purpose:

Hudson offers an eclectic mix of housing options. The purpose of the following action plans are to support and preserve a balanced housing supply that meets the needs of all residents within the City of Hudson.

- Action: Support efforts of private and non-profit organizations to address the needs of all income levels, age groups, and persons with special needs in the development of housing within Hudson.
- Increase the supply of alternative housing opportunities to serve residents of all ages, including but not limited to, independent and assisted living facilities for elderly and disabled residents.
- Support efforts and new programs that will provide additional elderly and disabled resident housing opportunities and services. Such housing should be centered in the downtown area.
- Promote the preservation and rehabilitation of the existing housing stock.

Transportation

Purpose:

The transportation system in the City of Hudson shall facilitate the safe and efficient movement of its citizens while preserving the identity of the community. The following are three primary components to transportation planning within the City of Hudson.

- Maintain an open line of communication with St. Croix County, WisDOT, and local or regional transit authorities to maintain and enhance transportation facilities throughout the region.
- Transportation improvements shall balance environmental factors with transportation needs and the desired land uses as identified in the future land use section of the Comprehensive Plan.
- Support efforts to expand walking, bicycling, transit, and other modes of transportation.

Utilities and Community Facilities

Purpose:

The ongoing support of police, fire and emergency services as well as community facilities is critical to maintaining the long-term health, safety and wellbeing of the City. The following is a list of key action items to be developed as part of the Comprehensive Plan.

- Utility improvements shall balance environmental factors with the need to rehabilitate and expand services and/or utility networks.
- Continue to evaluate the Comprehensive Plan and develop needed utilities and community facilities as deemed necessary.
- Communicate with area school districts to discuss issues associated with growth and development as it relates to potential changes in student enrollment.

Plan Amendments and Updates

Evaluating the Comprehensive Plan is an ongoing process and will, at some time, lead to the realization that the plan requires updating and amendments. The time that elapses between the completion of the plan and the need to amend the plan depend greatly on evolving issues, trends, and land use conditions. Periodic updates will allow for updates to statistical data, and too ensure the plan's goals, objectives, and actions reflect the current conditions, needs, and concerns. The Comprehensive Planning legislation requires plan updates at least every 10 years. The City of Hudson's Plan Commission will remain flexible in determining when and how often the plan should be updated.